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Section 5

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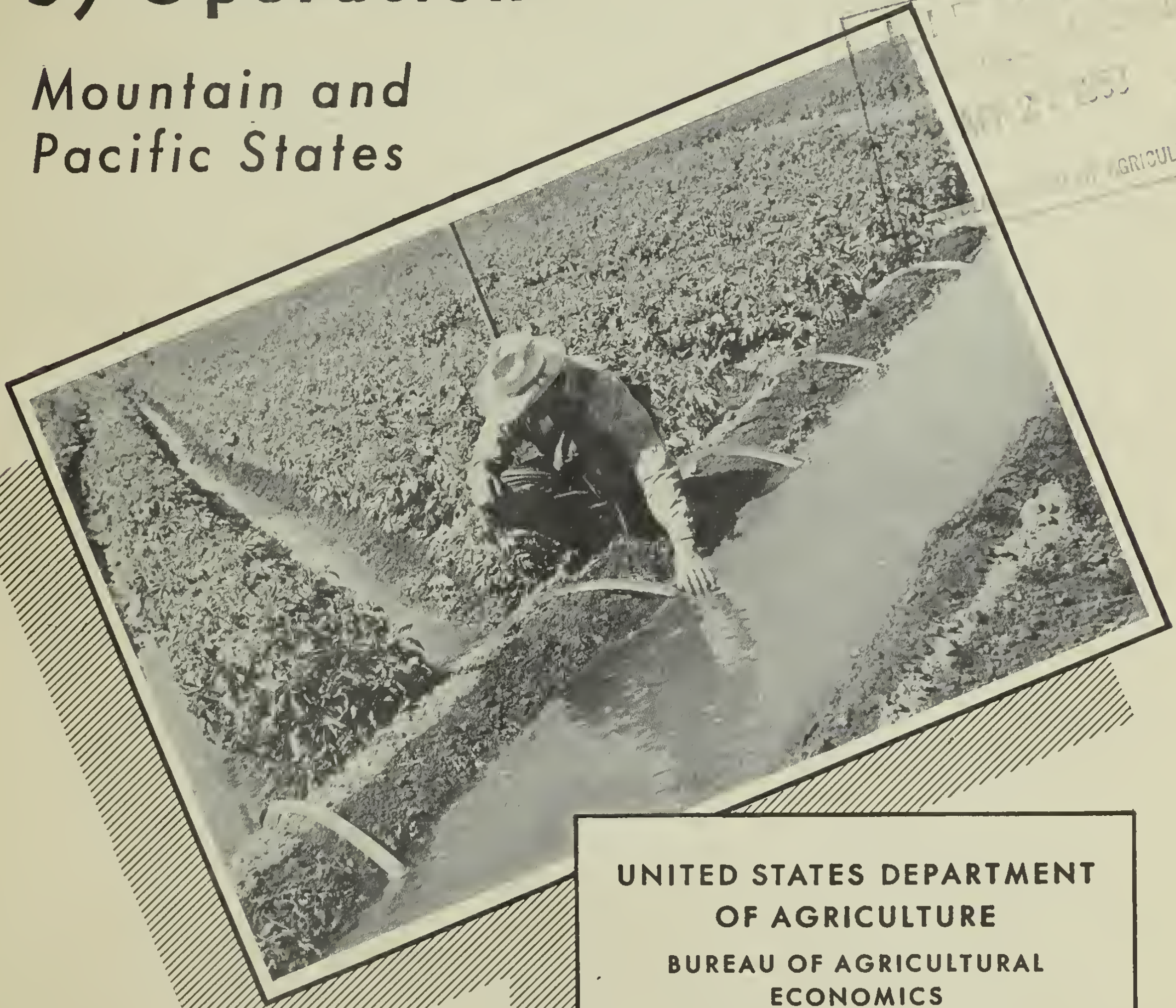
CROP PRODUCTION PRACTICES

Labor, Power, and Materials, by Operation

Mountain and Pacific States

AGRICULTURE



UNITED STATES DEPARTMENT
OF AGRICULTURE
BUREAU OF AGRICULTURAL
ECONOMICS
WASHINGTON, D. C.
March 1953

The following individuals on the staff of the Bureau of Agricultural Economics planned and directed the field surveys whereby the data released herein were obtained, and were responsible for summarizing and assembling the data: Wylie D. Goodsell, W. Herbert Brown, Herbert C. Fowler, I. Keith Harrison, Erling Hole, Edgar B. Hurd, Isabel Jenkins, S. W. Mendum, Stanley J. Provost, Christian A. Stokstad, and James Vermeer.

CROP PRODUCTION PRACTICES
Labor, Power and Materials, by Operation

Section 5 - MOUNTAIN AND PACIFIC STATES

This publication presents information concerning production practices, man labor, power, machinery, and material requirements for several important crops in specified type-of-farming areas in the Mountain and Pacific States.

The information presented for each crop in each type-of-farming area was obtained from approximately 30 to 90 farmers through personal interviews. Field surveys were made in 1948, 1949, 1950, 1951, and 1952. For the most part, information obtained was for the crop last harvested. As a result, data in the various sections of this publication cover specified crops harvested in 1947 through 1952. Surveys have been made for crops in other areas. Information relating to these crops is to be released as rapidly as it can be summarized.

Additional surveys are already planned. Some of these will cover additional areas and probably some different crops. Also, it is planned to repeat surveys in many of these areas to keep current as to changing practices and methods of production.

Farms included in the survey were selected through accepted random sampling methods from those growing the crops on a commercial basis in the specified area. In some instances, production of a particular crop was confined to a comparatively small area or to a number of small areas. Sometimes a crop was grown by practically all farmers in the type-of-farming area. In each instance, an attempt was made to obtain a cross-section of the commercial producers in the type-of-farming area.

Although the number of farms surveyed for each crop does not appear to be large in most cases, enough farms were surveyed so that reasonably stable averages for the common and important items were obtained. It was practically impossible to obtain statistically reliable estimates for many items on crops for which practices varied widely. This was particularly true when new practices and materials had been recently introduced, and had not as yet been adopted by many producers.

For example, in some areas the use of commercial fertilizers has been a standard practice for many years in the production of some crops. However, use of fertilizers in production of other crops in certain areas is still in the experimental stage, and the number of farmers using fertilizers and the kinds and amounts of fertilizer used vary widely.

Use of weed sprays is becoming common in many areas. Several new kinds of insecticides and fungicides are used and the method of applying them and the kind of equipment used vary widely. A good deal of spraying and dusting is done with custom or contract outfits. Much of it is done with wholly or partially farmer-made equipment. Some of the material is applied by airplane, particularly in later stages in the growth of the crop. These recent innovations in materials used and methods of application cause wide variation in materials used and practices followed by farmers.

In each instance, the farmer was asked to enumerate operations in the sequence in which they were performed. Kind and size of machine and tractor used and the number of men and the time required per acre were recorded for each operation. In the case of practices that were repeated, such as cultivating and irrigating, and consistent or significant differences in time requirements between practices were noted, the pertinent detail is listed separately in the summary tables.

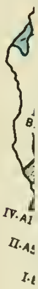
An attempt was made to account for all labor, power, machinery, contract or custom work, and material used in producing and harvesting the crops. In summarizing the data, certain items were combined unless it was apparent that the material or practice was increasing in importance and probably would become largely universal. For example, the use of pick-up balers, commercial fertilizers, and some pesticides appeared to be increasing in importance. These were listed and the percentage of the acreage covered was given so that at a later date changes in practices may be estimated.

Miscellaneous sizes of equipment were not listed in the final summaries but time requirements, acreage covered, and pertinent data for such operations were included with operations of important sizes of the same kind of equipment. For example, for a given crop in a certain area, 65 percent of the plowing was done with 2-14 inch plows, 30 percent with 1-16 inch plows, 3 percent with 1-18 inch plows, and 2 percent with 1-14 inch plows. In this case, acreages plowed with 1-14 and 1-18 inch plows are combined with the acreage plowed with 1-16 inch plows, and the rate of plowing carried in the summary for one-bottom plows is that for 1-16 inch plows.

In some instances it was impossible to obtain performance rates for custom machines from the persons interviewed. For this reason the rate used in the summaries for most custom jobs is the average rate given by farm operators who use the same sized-machines and crews. Custom work performed with several sizes of equipment, of which only one or two accounted for a sizable portion of the acreage, is listed with the more common size or sizes of equipment. Wherever practical local terminology was used in referring to practices followed, and machinery and materials used.

All work performed, regardless of who performed the service, and all materials used are included in the summary. Unless otherwise specified, a tractor was the source of power. Performance rates are those given for actual field operations under usual conditions. Time required in extensive repairs, break-downs, and general farm overhead is not included. In the final summarization time, requirements for each operation were multiplied by a specified factor to account for direct man-labor spent in lubricating, checking and adjusting machines,

CLASSIFICATION AND REGIONALIZATI



I. FRUIT, TRUCK, AND MIXED FARMING

A. FRUIT AND MIXED FARMING
- A 1. Central Washington. A 2. Southern Oregon. A 3. Sacramento Valley.
- A 4. San Joaquin Valley. A 5. Colorado West Slope.
- A 6. Ozark Plateau, Mo.—Ark.—Okla. A 7. Shenandoah—Cumberland Valleys.

B. FRUIT, TRUCK, AND MIXED FARMING
- B 1. Central California Coast. B 2. Southern California and Southwestern Arizona.
- B 3. Lower Rio Grande Valley. B 4. Central Florida.
- B 5. Eastern Shore of Lake Michigan. B 6. Southern Shore of Lake Ontario.
- B 7. Southern Shore of Lake Erie.

C. TRUCK AND MIXED FARMING
- C 1. Atlantic Sandy Coastal Plain. C 2. Gulf Coast.

D. TRUCK
- D 1. Southern Florida.

II. RANGE LIVESTOCK

A. SEASONAL GRAZING—MIGRATORY
- A 1. Great Basin. A 2. Wyoming Basin. A 3. Colorado Plateau.
- A 4. Columbia Basin—Blue Mountains. A 5. Snake River.
- A 6. Sierra Foothills—Coast Range.

B. SEASONAL GRAZING—NONMIGRATORY
- B 1. Northern Great Plains. B 2. Southern High Plains.
- B 3. Nebraska Sandhills Stock Farms. B 4. Osage—Flint Hills Stock Farms.
- B 5. Arbuckle Mountain, Oklahoma Stock Farms. B 6. North Texas Grazing Area.
- B 7. Canadian River Breaks. B 8. Central Plains Stock Farms.

C. UPLAND SUMMER GRAZING
- C 1. Sierra and Southern Cascade Mountains.
- C 2. Northern Rocky Mountains and Associated Ranges.
- C 3. Southern Rocky Mountains. C 4. Middle Rocky Mountains.

D. YEAR-LONG GRAZING
- D 1. Southwestern Semidesert, Migratory.
- D 2. Southwestern Semidesert, Nonmigratory.
- D 3. Edwards Plateau. D 4. Rio Grande Plains, Texas.

III. WHEAT AND SMALL GRAINS

A. SPECIALIZED WHEAT
- A 1. Columbia River Basin, Western Portion. A 2. East of Missouri River.
- A 3. Central North Dakota. A 4. Central Plains.

B. WHEAT AND PEAS
- B 1. Columbia River Basin, Eastern Portion.

C. WHEAT AND RANGE LIVESTOCK
- C 1. Triangle—Judith Basin, Montana. C 2. Northern Plains.
- C 3. Central High Plains. C 4. Red Hills. C 5. Southern Montana.

D. WHEAT, GRAIN SORGHUMS, AND RANGE LIVESTOCK
- D 1. Southern High Plains.

E. WHEAT AND GENERAL FARMING
- E 1. Southern Idaho. E 2. Red River Valley.
- E 3. South Dakota—North Dakota, Spring Wheat—Corn Transition.
- E 4. Central Kansas—Oklahoma.

F. SMALL GRAINS
- F 1. California Valley Borders.

IV. DAIRY

A. SPECIALIZED DAIRY
- A 1. North Pacific Coast. A 2. Eastern Wisconsin—Northeastern Illinois.
- A 3. Central Northeast. A 4. Boise Valley and Star Valley.
- A 5. San Joaquin Valley. A 6. Los Angeles Milkshed.

B. DAIRY AND LIVESTOCK
- B 1. Minnesota Cut-over Fringe. B 2. Southeast Minnesota—West Central Wisconsin.

C. DAIRY, HAY, AND POTATOES
- C 1. Lake States Cut-over, Small Scale.

D. DAIRY AND CASH CROPS
- D 1. East Central Michigan. D 2. Western New York.

E. DAIRY, POULTRY, AND MIXED FARMING
- E 1. Puget Sound—Willamette Valley. E 2. Southern New England.
- E 3. Hudson River Valley. E 4. Central Maine.

F. DAIRY AND GENERAL FARMING
- F 1. Central Wisconsin. F 2. Central Pennsylvania.
- F 3. Northern Piedmont. F 4. Lake Erie Border.
- F 5. Northern New England, Small Scale.
- F 6. Allegheny Plateau, Pennsylvania, Small Scale.

V. FEED GRAINS

A. CATTLE FEEDIN
- A 1. Central Mis

B. CASH CORN, OAT
- B 1. Central Iow

C. HOGS AND SOFT
- C 1. Central Indi
- C 2. Wabash and

D. LIVESTOCK, DAI
- D 1. Northweste

E. HOGS AND DAIRY
- E 1. N. E. Iowa—

F. LIVESTOCK AND
- F 1. Northweste
- F 2. Southweste
- F 3. Western Co
- F 5. Northern Io

G. LIVESTOCK, CAS
- G 1. Western Mi

H. LIVESTOCK AND
- H 1. Southern Io
- H 2. Northweste

VI. GENERAL FAR

A. DAIRY AND LIVE
- A 1. Western Ne

B. DAIRY, HAY, AND
- B 1. Lower Snak

C. DAIRY AND RANG
- C 1. Northern R

D. LIVESTOCK AND
- D 1. Central Uta
- D 3. San Luis Va
- D 6. Southern Ya

E. LIVESTOCK AND
- E 1. Grand Prai
- E 2. Southeast K
- E 3. Southern Hi

F. LIVESTOCK, TRU
- F 1. Southern Oz

G. DAIRY, LIVESTOC
- G 1. St. Louis M
- G 3. Southern Il

H. LIVESTOCK AND
- H 1. Knobs and C
- H 2. Highland Ri
- H 4. Central Vir

J. LIVESTOCK AND
- J 1. Central Bas

K. LIVESTOCK, FRU
- K 1. Appalachian

L. TRUCK, TOBACC
- L 1. Tidewater V

M. FOREST PRODUC
- M 1. Atlantic and
- M 2. Texas—Loui

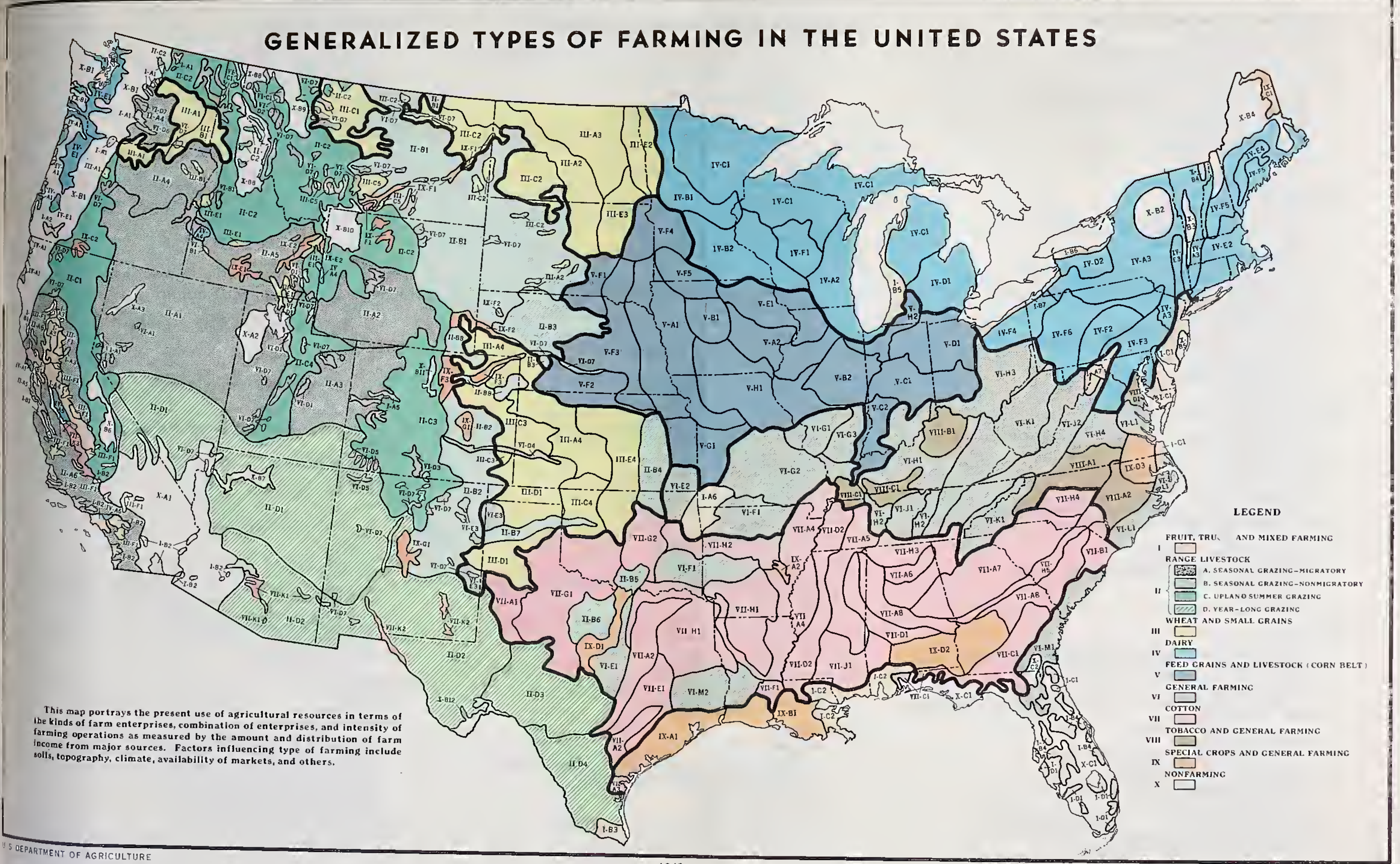
VII. COTTON

A. SPECIALIZED CO
- A 1. Southern Hi
- A 3. Corpus Chri
- A 5. Mississippi
- A 6. Sand Mounta
- A 8. Upper Coas

B. COTTON AND TO
- B 1. Central Coa

C. COTTON, TOBAC
- C 1. Lower Coas

GENERALIZED TYPES OF FARMING IN THE UNITED STATES


LEGEND
FRUIT, TRUCK, AND MIXED FARMING
I
RANGE LIVESTOCK
II
A. SEASONAL GRAZING–MIGRATORY
B. SEASONAL GRAZING–NONMIGRATORY
C. UPLAND SUMMER GRAZING
D. YEAR–LONG GRAZING
WHEAT AND SMALL GRAINS
III
DAIRY
IV
FEED GRAINS AND LIVESTOCK (CORN BELT)
V
GENERAL FARMING
VI
COTTON
VII
TOBACCO AND GENERAL FARMING
VIII
SPECIAL CROPS AND GENERAL FARMING
IX
NONFARMING
X

This map portrays the present use of agricultural resources in terms of the kinds of farm enterprises, combination of enterprises, and intensity of farming operations as measured by the amount and distribution of farm income from major sources. Factors influencing type of farming include soils, topography, climate, availability of markets, and others.

U S DEPARTMENT OF AGRICULTURE

1949

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BUREAU OF AGRICULTURAL ECONOMICS

CLASSIFICATION AND REGIONALIZATION OF TYPES OF FARMING IN THE UNITED STATES

I. FRUIT, TRUCK, AND MIXED FARMING

- A. FRUIT AND MIXED FARMING
  - A 1. Central Washington. A 2. Southern Oregon. A 3. Sacramento Valley.
  - A 4. San Joaquin Valley. A 5. Colorado West Slope.
  - A 6. Ozark Plateau, Mo.—Ark.—Okla. A 7. Shenandoah—Cumberland Valleys.
- B. FRUIT, TRUCK, AND MIXED FARMING
  - B 1. Central California Coast. B 2. Southern California and Southwestern Arizona.
  - B 3. Lower Rio Grande Valley. B 4. Central Florida.
  - B 5. Eastern Shore of Lake Michigan. B 6. Southern Shore of Lake Ontario.
  - B 7. Southern Shore of Lake Erie.
- C. TRUCK AND MIXED FARMING
  - C 1. Atlantic Sandy Coastal Plain. C 2. Gulf Coast.
- D. TRUCK
  - D 1. Southern Florida.

II. RANGE LIVESTOCK

- A. SEASONAL GRAZING—MIGRATORY
  - A 1. Great Basin. A 2. Wyoming Basin. A 3. Colorado Plateau.
  - A 4. Columbia Basin—Blue Mountains. A 5. Snake River.
  - A 6. Sierra Foothills—Coast Range.
- B. SEASONAL GRAZING—NONMIGRATORY
  - B 1. Northern Great Plains. B 2. Southern High Plains.
  - B 3. Nebraska Sandhills Stock Farms. B 4. Osage—Flint Hills Stock Farms.
  - B 5. Arbuckle Mountain, Oklahoma Stock Farms. B 6. North Texas Grazing Area.
  - B 7. Canadian River Breaks. B 8. Central Plains Stock Farms.
- C. UPLAND SUMMER GRAZING
  - C 1. Sierra and Southern Cascade Mountains.
  - C 2. Northern Rocky Mountains and Associated Ranges.
  - C 3. Southern Rocky Mountains. C 4. Middle Rocky Mountains.
- D. YEAR-LONG GRAZING
  - D 1. Southwestern Semidesert, Migratory.
  - D 2. Southwestern Semidesert, Nonmigratory.
  - D 3. Edwards Plateau. D 4. Rio Grande Plains, Texas.

III. WHEAT AND SMALL GRAINS

- A. SPECIALIZED WHEAT
  - A 1. Columbia River Basin, Western Portion. A 2. East of Missouri River.
  - A 3. Central North Dakota. A 4. Central Plains.
- B. WHEAT AND PEAS
  - B 1. Columbia River Basin, Eastern Portion.
- C. WHEAT AND RANGE LIVESTOCK
  - C 1. Triangle—Judith Basin, Montana. C 2. Northern Plains.
  - C 3. Central High Plains. C 4. Red Hills. C 5. Southern Montana.
- D. WHEAT, GRAIN SORGHUMS, AND RANGE LIVESTOCK
  - D 1. Southern High Plains.
- E. WHEAT AND GENERAL FARMING
  - E 1. Southern Idaho. E 2. Red River Valley.
  - E 3. South Dakota—North Dakota, Spring Wheat—Corn Transition.
  - E 4. Central Kansas—Oklahoma.
- F. SMALL GRAINS
  - F 1. California Valley Borders.

IV. DAIRY

- A. SPECIALIZED DAIRY
  - A 1. North Pacific Coast. A 2. Eastern Wisconsin—Northeastern Illinois.
  - A 3. Central Northeast. A 4. Boise Valley and Star Valley.
  - A 5. San Joaquin Valley. A 6. Los Angeles Milkshed.
- B. DAIRY AND LIVESTOCK
  - B 1. Minnesota Cut-over Fringe. B 2. Southeast Minnesota—West Central Wisconsin.
- C. DAIRY, HAY, AND POTATOES
  - C 1. Lake States Cut-over, Small Scale.
- D. DAIRY AND CASH CROPS
  - D 1. East Central Michigan. D 2. Western New York.
- E. DAIRY, POULTRY, AND MIXED FARMING
  - E 1. Puget Sound—Willamette Valley. E 2. Southern New England.
  - E 3. Hudson River Valley. E 4. Central Maine.
- F. DAIRY AND GENERAL FARMING
  - F 1. Central Wisconsin. F 2. Central Pennsylvania.
  - F 3. Northern Piedmont. F 4. Lake Erie Border.
  - F 5. Northern New England, Small Scale.
  - F 6. Allegheny Plateau, Pennsylvania, Small Scale.

V. FEED GRAINS AND LIVESTOCK (CORN BELT)

- A. CATTLE FEEDING AND HOGS
  - A 1. Central Missouri River Valley. A 2. Eastern Iowa—Western Illinois.
- B. CASH CORN, OATS, AND SOYBEANS
  - B 1. Central Iowa. B 2. East Central Illinois.
- C. HOGS AND SOFT WINTER WHEAT
  - C 1. Central Indiana—Southwestern Ohio.
  - C 2. Wabash and Lower Ohio River Valleys.
- D. LIVESTOCK, DAIRY, SOYBEANS, AND CASH GRAIN
  - D 1. Northwestern Ohio—Northeastern Indiana.
- E. HOGS AND DAIRY
  - E 1. N. E. Iowa—N. W. Illinois—S. W. Wisconsin.
- F. LIVESTOCK AND CASH GRAIN
  - F 1. Northwestern Corn—Livestock Transition.
  - F 2. Southwestern Corn—Hard Winter Wheat Transition.
  - F 3. Western Corn Belt Fringe. F 4. Northwestern Corn Belt Fringe.
  - F 5. Northern Iowa—Southwestern Minnesota.
- G. LIVESTOCK, CASH GRAIN, AND DAIRY
  - G 1. Western Missouri—Eastern Kansas.
- H. LIVESTOCK AND PASTURE
  - H 1. Southern Iowa—Northern Missouri—West Central Illinois.
  - H 2. Northwestern Indiana—Southwestern Michigan.

VI. GENERAL FARMING

- A. DAIRY AND LIVESTOCK FEEDING—IRRIGATED
  - A 1. Western Nevada.
- B. DAIRY, HAY, AND SUGAR BEETS—IRRIGATED
  - B 1. Lower Snake River
- C. DAIRY AND RANGE LIVESTOCK—SMALL SCALE
  - C 1. Northern Rocky Mountain Cut-over.
- D. LIVESTOCK AND SPECIAL CROPS—IRRIGATED
  - D 1. Central Utah and Southeastern Idaho. D 2. Western Montana.
  - D 3. San Luis Valley. D 4. Upper Arkansas Valley. D 5. San Juan Basin.
  - D 6. Southern Yakima Valley. D 7. Other Irrigated Valleys.
- E. LIVESTOCK AND CASH GRAIN
  - E 1. Grand Prairie of Texas.
  - E 2. Southeast Kansas—Northeast Oklahoma.
  - E 3. Southern High Plains, Texas—New Mexico.
- F. LIVESTOCK, TRUCK, AND COTTON—SMALL SCALE
  - F 1. Southern Ozark and Ouachita Mountains.
- G. DAIRY, LIVESTOCK, AND POULTRY
  - G 1. St. Louis Milkshed. G 2. Ozark Mountains and Border.
  - G 3. Southern Illinois Gray Lands.
- H. LIVESTOCK AND TOBACCO
  - H 1. Knobs and Coal Fields, Indiana—Kentucky.
  - H 2. Highland Rim of Tennessee. H 3. Upper Ohio River Valley and Hills.
  - H 4. Central Virginia Piedmont.
- J. LIVESTOCK AND DAIRY
  - J 1. Central Basin of Tennessee. J 2. Great Appalachian Valley.
- K. LIVESTOCK, FRUIT, AND TOBACCO—SMALL SCALE
  - K 1. Appalachian Mountains.
- L. TRUCK, TOBACCO, AND LIVESTOCK
  - L 1. Tidewater Virginia—North Carolina.
- M. FOREST PRODUCTS, TRUCK, AND COTTON—SMALL SCALE
  - M 1. Atlantic and Gulf Coast Flatwoods.
  - M 2. Texas—Louisiana Cut-over.

VII. COTTON

- A. SPECIALIZED COTTON
  - A 1. Southern High Plains. A 2. Texas Black Waxy Prairies.
  - A 3. Corpus Christi. A 4. Deltas of Mississippi River and Tributaries.
  - A 5. Mississippi and Tennessee Clay Hills and Sandy Loams.
  - A 6. Sand Mountain, Alabama. A 7. Southern Piedmont.
  - A 8. Upper Coastal Plains.
- B. COTTON AND TOBACCO
  - B 1. Central Coastal Plains, North Carolina—South Carolina.
- C. COTTON, TOBACCO, HOGS, AND PEANUTS
  - C 1. Lower Coastal Plains, Georgia—Florida.

VII. COTTON (CONTINUED)

- D. COTTON AND LIVESTOCK
  - D 1. Alabama—Mississippi Black Belt.
  - D 2. Mississippi—Tennessee—Louisiana Silt Loams.
- E. COTTON AND RANGE LIVESTOCK
  - E 1. Post Oak Strip of Texas.
- F. COTTON AND SUGARCANE
  - F 1. Central Louisiana.
- G. COTTON AND WHEAT
  - G 1. Rolling Plains, Texas—Oklahoma.
  - G 2. Mixed Prairies and Cross Timbers of Oklahoma.
- H. COTTON AND GENERAL FARMING
  - H 1. Western Sandy Coastal Plains, Texas—Arkansas—Louisiana—Oklahoma.
  - H 2. Arkansas River Valleys and Uplands.
  - H 3. Limestone Valleys and Uplands, Tennessee—Georgia—Alabama.
  - H 4. Piedmont of Central North Carolina.
  - H 5. Sand Hills of the Carolinas and Georgia.
- J. COTTON AND FOREST PRODUCTS
  - J 1. Gulf Coast Piney Woods.
- K. IRRIGATED COTTON AND ALFALFA
  - K 1. Southern Arizona. K 2. Rio Grande—Pecos. K 3. San Joaquin Valley.

VIII. TOBACCO AND GENERAL FARMING

- A. FLUE-CURED
  - A 1. Piedmont, Virginia—North Carolina.
  - A 2. Central Coastal Plains, North Carolina.
- B. BURLEY
  - B 1. Central Kentucky Bluegrass.
- C. DARK
  - C 1. Pennyroyal—Purchase, Kentucky—Tennessee.
- D. SOUTHERN MARYLAND
  - D 1. Southern Maryland.

IX. SPECIAL CROPS AND GENERAL FARMING

- A. RICE
  - A 1. Gulf Coastal Prairies, Texas—Louisiana.
  - A 2. Arkansas Prairies.
- B. SUGARCANE
  - B 1. Lower Louisiana Delta.
- C. POTATOES
  - C 1. Aroostook County, Maine.
  - C 2. Klamath Basin, Oregon—California.
- D. PEANUTS
  - D 1. Cross Timbers, Texas.
  - D 2. Southern Coastal Plains, Georgia—Alabama.
  - D 3. Northern Coastal Plains, Virginia—North Carolina.
- E. POTATOES, DRY BEANS, SUGAR BEETS, AND LIVESTOCK—IRRIGATED
  - E 1. Middle Snake River. E 2. Upper Snake River.
- F. SUGAR BEETS, DRY BEANS, AND LIVESTOCK—IRRIGATED
  - F 1. Upper Yellowstone River and Wyoming.
  - F 2. North Platte River. F 3. Northeastern Colorado.
- G. DRY BEANS—NONIRRIGATED
  - G 1. Colorado—New Mexico.

X. NONFARMING

- A. DESERTS
  - A 1. Mohave Desert. A 2. Utah Salt Flats. A 3. Black Rock Desert.
- B. MOUNTAINS AND FORESTS
  - B 1. Cascade Mountains and Associated Ranges.
  - B 2. Adirondack Mountains. B 3. Green Mountains of Vermont.
  - B 4. Northern Maine and New Hampshire Woods. B 5. New Jersey Pines.
  - B 6. Yosemite, General Grant, and Sequoia National Parks and Vicinity.
  - B 7. Grand Canyon National Park and Vicinity.
  - B 8. Northwestern Rocky Mountain Area.
  - B 9. Glacier National Park and Vicinity.
  - B10. Yellowstone National Park and Vicinity.
  - B11. Rocky Mountain National Park and Vicinity.
  - B12. Big Bend National Park and Vicinity.
- C. LOWLANDS AND EVERGLADES
  - C 1. Florida Everglades and Flatwoods. C 2. Okefenokee Swamp.

making minor repairs, loading or filling machines such as drills, planters, dusters, fertilizer spreaders et cetera, and moving from field to field.

Immediately following this discussion is a map which identifies or locates each type-of-farming area. The identification of type-of-farming areas given on the map corresponds with the identification of the type-of-farming areas listed in the tables that follow, showing crops, areas and the year to which the data apply.

Following the map is a listing of the crops for which data were obtained in the Mountain and Pacific States, the year to which the data pertain, and the type-of-farming area or portion of the area in which the survey was made. Data obtained for the crop produced in part of the type-of-farming area are so specified.

Information similar to that presented in this publication is given in other publications for: (1) the Northeast, (2) the Corn Belt and Lake States, (3) the Appalachian, Southeast and Mississippi Delta, and (4) the northern and southern Plains. A list of States included in each type-of-farming region, together with the information available for each region, appears at the end of this publication.

Requests for this information have come from many sources. One of the primary uses of the data has been to enable personnel in the Bureau of Agricultural Economics to provide the Federal Crop Insurance Corporation with estimates of farmers' investments in insured crops by stages in the growth of the crop. These estimates are revised each year as practices and cost rates change.

Extensive use is made of the data in many research projects, particularly in the research work relating to costs and returns in the Bureau of Agricultural Economics. Wide use of the data also is made by staffs in the Land-Grant Colleges, by other agencies in the Federal Government, and by private organizations and individuals. Staffs in the Land-Grant Colleges in many States contributed data, made helpful suggestions, and assisted in many other ways.

Crops and Type-of-Farming Areas for which Cropping-Practice Data are Available in Section 5

Mountain and Pacific States

Crop	Type-of-farming area	Crop year	Page
Alfalfa:			
Irrigated	II-A3	1950	7
	II-B2	1950	9
	III-E1	1952	12
	VI-D1	1950	15
	VI-D3	1950	17
	VI-D4	1950	20
	VI-D7 (Oreg.)	1950	23
	VI-D7 (Wyo.)	1952	26
	IX-F1	1950	29
	IX-F2	1951	31
Alfalfa seed:			
Irrigated	VI-D7 (Wyo.)	1952	33
Austrian winter peas:			
Nonirrigated	IV-E1	1950	36
Barley:			
Irrigated	I-A1	1949	38
	I-A5	1952	40
	II-A3	1950	42
	II-B2	1950	44
	III-C3 (Colo.)	1950	46
	III-F1	1952	48
	VI-D1	1950	50
	VI-D3	1950	52
	VI-D4	1950	54
	VI-D7 (Oreg.)	1950	56
	VI-D7 (Wyo.)	1952	58
	IX-F1	1950	60
	IX-F2	1951	62
Barley: (Contd.)			
Nonirrigated	I-A3	1950	64
	II-B2	1950	66
	III-B1	1948	68
	III-C2	1950	70
	III-C3 (Colo.)	1950	72
	IV-E1	1950	74
Beans, dry:			
Irrigated	I-A1	1949	76
	I-A3	1949	78
	I-A5	1950	80
	III-B1	1949	82
	VI-D4	1950	84
	VI-D5 (Colo.)	1950	86
	VI-D5 (N.Mex.)	1950	88
	VI-D7 (N.Mex.)	1950	90
	VI-D7 (Wyo.)	1952	92
	IX-E1	1949	94
	IX-F1	1949	96
	IX-F1	1951	98
	IX-F2	1951	100
Nonirrigated	II-B2	1950	102
	II-C3 (Colo.)	1950	104
	II-D1 (Ariz.)	1950	106
	IX-G1 (N.Mex.)	1950	108

Continued

Crops and Type-of-Farming Areas for which Cropping-Practice Data are Available in Section 5 - Continued

Mountain and Pacific States

Crop	Type-of-farming area	Crop year	Page
Broomcorn:			
Nonirrigated	II-B2	1950	110
Corn, grain:			
Irrigated	I-A1	1949	112
	I-A5	1952	114
	II-B2	1950	116
	VI-D4	1950	118
	IX-F2	1951	120
Nonirrigated	II-B2	1950	122
Corn, silage:			
Irrigated	I-A5	1952	124
	II-A3	1949	126
	II-B2	1950	128
	VI-D1	1949	130
	VI-D7 (Wyo.)	1952	132
	IX-F1	1951	134
Cotton:			
Irrigated	VII-K1	1949	136
Flax:			
Nonirrigated	III-C2	1950	138
Grain sorghum:			
Irrigated	VI-D4	1950	140
Nonirrigated	II-B2	1950	142
Hops:			
Irrigated	I-A1	1949	144
Ladino seed:			
Irrigated	VI-D7 (Oreg.)	1950	146
Oats:			
Irrigated	I-A1	1949	149
	I-A5	1952	151
	II-A3	1950	153
	III-C3 (Colo.)	1950	155
	VI-D1	1950	157
	VI-D3	1950	159
	VI-D4	1950	161
	VI-D7 (Oreg.)	1950	163
	VI-D7 (Wyo.)	1952	165
	IX-F1	1950	167
	IX-F2	1951	169
Nonirrigated	III-C2	1950	171
	IV-E1	1950	173
Onions:			
Irrigated	I-A5	1952	175
	VI-B1	1950	177
	VI-D4	1950	179
Peas, dry field:			
Nonirrigated	III-B1	1948	181
Potatoes:			
Irrigated	I-A1	1949	183
	I-A5	1952	185
	VI-D1	1950	187
	VI-D3	1950	189
	VI-D4	1950	191
	VI-D7 (Oreg.)	1950	193
Rice:			
Irrigated	I-A3	1949	195
Rye:			
Nonirrigated	III-C2	1950	197

Continued

Crops and Type-of-Farming Areas for which Cropping-Practice Data are Available in Section 5 - Continued

Mountain and Pacific States

Crop	Type-of-farming area	Crop year	Page	Crop	Type-of-farming area	Crop year	Page
Sugar beets:				Wheat (Contd.)			
Irrigated	I-A1	1949	199	Nonirrigated			
	II-B2	1950	201	Cont. cropping ...	I-A3	1950	243
	VI-D1	1951	203		II-B2	1950	245
	VI-D4	1950	205		III-A4	1952	247
	IX-F1	1949	207		III-B1	1948	249
	IX-F2	1951	209		III-C2	1950	251
					III-C3		
Vetch seed, common:					(Colo.)	1950	253
Nonirrigated	IV-E1	1950	211		IV-E1	1950	255
Vetch seed, hairy:				Summer fallow	II-A1		257
Nonirrigated	IV-E1	1950	213		(Utah)	1951	
					II-B2	1950	259
Wheat:					II-C3		
Irrigated	I-A1	1949	215		(Colo.)	1951	261
	I-A5	1952	217		II-D1		
	II-A3	1950	219		(Utah)	1951	263
	II-B2	1950	221		III-A1		
	III-C3				(Oreg.)	1948	265
	(Colo.)	1950	223		III-A1		
	III-E1	1952	225		(Wash.		
	VI-D1	1950	227		part)	1948	267
	VI-D1	1951	229		III-A1		
	VI-D3	1950	231		(Wash.		
	VI-D4	1950	233		part)	1948	269
	VI-D5				III-A4	1952	271
	(Colo.)	1951	235		III-B1	1948	273
	VI-D7				III-C2	1950	275
	(Oreg.)	1950	237		III-C3		
	VI-D7				(Colo.)	1950	277
	(Wyo.)	1952	239		III-C5	1951	279
	IX-F1	1950	241		III-E1	1948	281
					III-E1	1949	283
					III-E1	1952	285
					III-F1	1952	287
					VI-D1	1950	289
				After corn	III-C2	1950	291
				After sweet clover	III-B1	1948	293

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-A3, 1950

The data presented here are based on a survey of approximately 40 farms in east central Utah. These farms are located in the irrigated valleys along the Colorado, Strawberry, and Green Rivers in Utah. These valleys comprise comparatively small portions of type-of-farming area II-A3, a seasonal migratory grazing area. The particular farms surveyed are for the most part general farms, producing livestock, corn, and small grains. Some of the farmers operate additional grazing or non-irrigated units in connection with their irrigated land

Nearly all of the alfalfa in this area is seeded with a nurse crop. Farmers reported that hay seeding usually lasted 4 years. As a result, one-half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop. All additional materials, man labor, and power and machinery used directly in establishing the hay crop are prorated also to the annual charges for the hay crop according to the estimated life of the seeding.

The farms averaged about 170 acres per farm. Cropland comprised about 141 acres. In 1950, about 28 acres were in alfalfa cut for hay, and the average yield was approximately 3.6 tons per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 25; the most common was about 17.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Seed	Lb.	13	0.60	7.80	100	7.80
Manure	Ton	6	1/ 2.00	12.00	31	2/ 1.86
Total for establishment						9.66
Annual charge to alfalfa	---	---	---	---	---	2.42
Mixed fertilizer	Cwt.	2.10	3.20	6.72	44	2.96
Dust and poison	Lb.	19	.12	2.28	8	.18
Water	Acre	1.0	1.70	1.70	100	1.70
Baling wire	Lb.	28.8	.12	3.46	7	.24
Baling twine	Lb.	12.6	.30	3.78	14	.53
Total annual charge						8.03

CONTRACT WORK HIRED

Seeding (annual charge to alfalfa)	Acre	1.0	1.60	1.60	14	2/ .02
Baling	Acre	3/ 3.2	4.15	13.28	12	1.59
Total contract work						1.61

1/ Estimated.

2/ Allocated one-half the cost to the nurse crop.

3/ One acre times average number of cuttings.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area II-A3, east central Utah, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Establish seeding:								
Total alfalfa 1/	---	---	---	---	---	6.54	2.70	1.58
Annual 2/	---	---	---	---	---	1.64	.68	.40
Ditch	---	1.0	0.59	0.30	63	.37	.19	---
Ditch, horse	---	1.0	.71	.68	15	.11	---	.10
Ditch by hand	---	1.0	.89	---	33	.29	---	---
Fertilize, spreader	8-foot	1.0	.59	.51	42	.25	.21	---
Fertilize, spreader, h.	8-foot	1.0	.65	1.10	2	.01	---	.02
Irrigate	---	4.1	1.85	---	94	7.13	---	---
Dust and poison	16-foot	1.5	.44	.41	5	.03	.03	---
Dust and poison, horses	16-foot	1.0	.44	.80	3	.01	---	.02
Total preharvest						9.84	1.11	.54
Mow	7-foot	3.2	.54	.49	61	1.06	.96	---
Mow, horses	5-foot	3.2	1.33	2.44	39	1.66	---	3.05
Rake, side-delivery	---	3.2	.46	.42	17	.25	.23	---
Rake, dump	10-foot	3.2	.58	.52	29	.54	.48	---
Rake, dump, horses	10-foot	3.2	.84	1.53	54	1.45	---	2.65
Bunch	10-foot	3.2	.55	.50	6	.11	.10	---
Bunch, horses	10-foot	3.2	.76	1.39	22	.53	---	.98
Bunch by hand	---	3.2	1.17	---	17	.64	---	---
Haul and stack, J-Hawk	---	3.2	3.73	1.45	29	3.46	1.35	---
Haul and stack	---	3.2	4.03	1.23	14	1.81	.55	---
Haul and stack, horses	---	3.2	4.94	4.31	36	5.69	---	4.96
Bale, windrow	---	3.2	1.42	.87	9	.41	.25	---
Bale, windrow, contract	---	3.2	1.42	.87	12	.54	.33	---
Haul bales, truck	---	3.2	2.30	.70	18	1.32	---	---
Haul bales, horses	---	3.2	2.14	1.96	3	.21	---	.19
Total harvest						19.68	4.25	11.83
Total 3/						29.52	5.36	12.37

1/ Nearly all of the farms in this area seeded hay crops with a nurse crop. As a result the total given here is one-half of the total required jointly to establish the seeding and the nurse crop.

2/ The estimated average life of alfalfa hay seedings in this area is approximately 4 years. The labor and power and machinery charged to establishing the seeding are prorated annually to the hay crop according to the average life of seeding.

3/ In addition, truck use averaged 0.40 hour an acre.

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of 48 farms producing alfalfa hay under irrigation in southeastern Colorado and northeastern New Mexico. These farms are located in irrigated valleys of type-of-farming area II-B2, a range-livestock area in the southern High Plains.

Nearly all of the alfalfa in this area is seeded with a nurse crop. Farmers reported that alfalfa hay seedings usually lasted 6 years. As a result, half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop, and a sixth of this is charged annually to the hay crop. All additional materials, such as alfalfa and grass seeds, and man labor, power, and machinery used directly in establishing the hay crop, are also prorated to the annual charges for the hay crop according to the estimated life of the seeding.

The farms surveyed averaged about 614 acres per farm. Cropland comprised about 157 acres. In 1950, 43 acres were in alfalfa hay, and the yield averaged about 2.1 tons per acre.

Tractors and motorized equipment provided most of the power used on these farms, although horses were used for raking on some farms. The drawbar-horsepower rating of the tractors ranged from 10 to 36; the most common was about 17.

Materials used and contract work hired, alfalfa hay (irrigated), area II-B2, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Alfalfa seed	Lb.	13	0.50	6.50	100	6.50
Brome grass seed	Lb.	5.0	.33	1.65	30	.50
Seed treat, nitrogen	Lb.	13.0	.02	.26	11	.03
Manure	Ton	5.0	1/2.00	10.00	12	2/ .60
Phosphate fertilizer(0-42-0)	Cwt.	2.6	3.50	9.10	21	2/ .95
Water	Acre	1.0	2.95	2.95	100	2/1.47
Total for establishment						10.05
Annual charge to alfalfa:		---	---	---	---	1.67
Phosphate fertilizer(0-42-0)	Cwt.	2.2	3.50	7.70	2	.15
Water	Acre	1.0	2.95	2.95	100	2.95
Twine, baler	Lb.	6.0	.30	1.80	10	.18
Wire, bale ties	500	.22	6.90	1.52	60	.91
Total annual charge						5.86

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Mowing	Acre	2.8	1.10	3.08	8	.25
Raking	Acre	2.8	.90	2.52	9	.23
Baling 3/	Bale	56.0	.17	9.52	14	1.33
Hauling bales	Bale	56.0	.04	2.24	11	.25
Total contract work						2.06

1/ Estimated.
2/ Allocated one-half the cost to the nurse crop.
3/ Cost includes baler twine.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area II-B2, southeastern Colorado and northeastern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding:							
Total alfalfa 1/	---	---	---	---	---	5.26	2.67
Annual 2/	---	---	---	---	---	.88	.44
Fertilize, spreader	7-foot	1.0	.72	.63	2	.01	.01
Disk, tandem	10-foot	1.0	.51	.48	21	.11	.10
Rotary hoe	8-foot	1.0	.77	.70	6	.05	.04
Harrow, spiketooth	15-foot	2.0	.33	.30	23	.15	.14
Harrow, springtooth	10-foot	1.2	.70	.64	7	.06	.05
Level, wooden	9-foot	1.0	.52	.49	6	.03	.03
Ditch, hand	---	1.2	.83	---	7	.07	---
Ditch	6-foot	1.2	.11	.10	29	.04	.03
Corrugate	6-row	1.0	.46	.42	6	.03	.03
Irrigate	---	3.0	1.05	---	100	3.15	---
Total preharvest						4.58	.87
Mow	7-foot	2.8	.49	.45	92	1.26	1.16
Mow, contract	7-foot	2.8	.49	.45	8	.11	.10
Rake, dump	10-foot	2.8	.62	.57	3	.05	.05
Rake, side-delivery	7-foot	2.8	.56	.51	40	.63	.57
Rake, side-delivery	10-foot	2.8	.46	.42	48	.62	.57
Rake, side-delivery, c.	10-foot	2.8	.46	.42	9	.12	.11
Bunch, buckrake	12-foot	2.8	.25	.23	1	.01	.01
Bunch, horse, dumprake	10-foot	2.8	.34	.66	6	.06	---
Haul &stack, loose hay	---	2.8	3.14	1.63	3	.26	.14
Buckrake	12-foot	2.8	.93	.85	3	.08	.07
Stack, overshot	---	2.8	1.39	.85	3	.12	.07
Bale	---	2.8	1.62	.59	70	3.18	1.15
Bale, contract	---	2.8	1.25	.52	14	.49	.20
Haul bales	---	2.8	1.78	.63	37	1.84	.65
Haul bales, contract	---	2.8	1.78	.63	5	.25	.09
Haul bales, truck	---	2.8	2.18	.68	36	2.20	---
Haul bales, truck, c.	---	2.8	2.18	.68	6	.37	---
Field chop	---	2.8	1.46	1.40	10	.41	.39
Haul and elevate	---	2.8	3.07	1.34	10	.86	.37
Total harvest						12.92	5.70
Total 3/						17.50	6.57

1/ In this area nearly all of the farms seeded hay crops with a nurse crop. As a result, the total given here is one-half of the total required jointly to establish the seeding and the nurse crop. 2/ The estimated average life of an alfalfa hay seeding in this area is approximately 6 years. The labor, power, and machinery charged to establishing the seeding are prorated annually to the hay crop according to the average life of the seeding. 3/ In addition, horse work averaged 0.11 hour an acre, and truck use 0.79 hour an acre.

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA III-E1, 1952

The data presented here are based on a survey made in 1952 of approximately 45 farms that produced alfalfa hay under irrigation in 1952 in central Idaho. These farms are located in type-of-farming area III-E1, which is comprised of a number of rather small valleys in the southern part of Idaho. Usually a relatively small portion of the valleys is under irrigation but a variety of crops is grown. Alfalfa hay is grown almost universally on the irrigated farms, and is one of the principal crops produced. The nontillable lands in these particular valleys, and in the foothills and mountains surrounding the valleys, are extensively grazed. Many of the farmers in the valleys graze cattle on public domain during the summer and feed them in the valleys during the winter.

The water supply on these farms is reasonably plentiful, but the growing season is not long. More than 95 percent of the farmers reported that they obtained only two cuttings of alfalfa during the season. As nearly all of the alfalfa in this area is seeded with a nurse crop, half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop. All additional materials, man labor, and power and machinery used directly in establishing the hay crop are also prorated to the annual charges for the hay crop according to the estimated life of the seeding. Farmers reported that hay seedings usually lasted about 6 years.

The farms surveyed averaged about 260 acres per farm. Cropland comprised about 165 acres. In 1952, about 65 acres were in alfalfa hay, and the yield averaged approximately 3.8 tons an acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 26; the most common was about 19.

Materials used and contract work hired, alfalfa hay (irrigated), area III-E1, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Alfalfa seed	Lb.	12	0.68	8.16	100	8.16
Manure	Ton	11	1/2.00	22.00	3	2/ .33
Nitrate fertilizer (33-0-0)	Cwt.	1.25	5.00	6.25	2	2/ .06
Phosphate fertilizer(0-43-0)	Cwt.	1.25	3.75	4.69	7	2/ .16
Spray (2,4-D)	Pt.	1.0	.65	.65	4	2/ .02
Chlordane	Pt.	1.5	1.50	2.25	39	2/ .44
Water	Acre	1.0	1.40	1.40	100	2/ .70
Total for establishment						9.87
Annual charge to alfalfa:		---	---	---	---	1.64
Manure	Ton	11	1/2.00	22.00	3	.66
Nitrate fertilizer (33-0-0)	Cwt.	1.25	5.00	6.25	2	.12
Phosphate fertilizer(0-43-0)	Cwt.	1.25	3.75	4.69	7	.33
Spray (2, 4-D)	Pt.	1.0	.65	.65	4	.03
Chlordane	Pt.	1.5	1.50	2.25	39	.88
Water	Acre	1.0	1.50	1.50	100	1.50
Twine, baler 3/	Lb.	11.4	.42	4.79	57	2.73
Wire, baler 4/	Lb.	26.6	.10	2.66	14	.37
Total annual charge						8.26

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	2.25	2.25	21	.47
Baling	Ton	3.8	3.75	14.25	13	1.85
Hauling 5/	Ton	3.8	2.35	8.93	6	.54
Total contract work						2.86

1/ Estimated.

2/ Allocated one-half the cost to the nurse crop.

3/ Approximately 3 pounds of twine were used per ton of hay baled.

4/ Approximately 7 pounds of wire were used per ton of hay baled.

5/ Bales averaged about 60 pounds each and average trucking rate was about 7 cents a bale.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area III-El, central Idaho, 1952

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding:							
Total alfalfa 1/	---	---	---	---	---	6.68	2.42
Annual 2/	---	---	---	---	---	1.11	.40
Apply manure	---	1.0	5.67	5.67	3	.17	.17
Harrow, springtooth	9-foot	1.0	.48	.44	34	.16	.15
Harrow, spiketooth	15-foot	1.0	.28	.25	35	.10	.09
Ditch	---	1.6	.28	.25	62	.28	.25
Irrigate	---	4.0	2.50	---	100	10.00	---
Spray	20-foot	1.0	.39	.36	22	.09	.08
Spray, contract	20-foot	1.0	.39	.36	21	.08	.08
Total preharvest						11.99	1.22
Mow	7-foot	2.0	.53	.48	100	1.06	.96
Rake, side-delivery	---	2.0	.51	.46	100	1.02	.92
Bale	---	2.0	1.03	.76	58	1.19	.88
Bale, contract	---	2.0	1.03	.76	13	.27	.20
Bunch, dump rake	---	2.0	.48	.48	9	.09	.09
Haul and stack	---	2.0	3.74	1.58	29	2.17	.92
Haul, truck	1½-ton	2.0	2.18	.89	58	2.53	---
Haul, truck, contract	1½-ton	2.0	2.18	.89	6	.26	---
Total harvest						8.59	3.97
Total 4/						20.58	5.19

1/ In this area nearly all of the farms seeded hay crops with a nurse crop. As a result, the total given here is one-half of the total required jointly to establish the seeding and the nurse crop.

2/ The average life of an alfalfa hay seeding in this area is approximately 6 years. The labor, power and machinery charged to establishing the seeding are prorated annually to the hay crops according to the life of the seeding.

3/ No trucking rates were available for the considerable quantities of hay which were sold in the field.

4/ In addition, truck use averaged 1.14 hours an acre.

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D1, 1950

The data presented here are based on a survey of approximately 45 farms. These farms are located in type-of-farming area VI-D1, a general farming area in the irrigated valleys of southeastern Idaho and central Utah. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

Nearly all of the alfalfa in this area is seeded with a nurse crop. Farmers reported that hay seeding usually lasted 4 years. As a result, one-half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop. All additional materials, man labor, and power and machinery used directly in establishing the hay crop are prorated also to the annual charges for the hay crop according to the estimated life of the seeding.

The farms averaged about 135 acres per farm. Cropland comprised about 96 acres. In 1950, about 25 acres were in alfalfa cut for hay, and the average yield was approximately 4.0 tons per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 26; the most common was about 17.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Seed	Lb.	13	0.65	8.45	100	8.45
Manure	Ton	9	1/ 2.00	18.00	18	2/ 1.62
Total for establishment						10.07
Annual charge to alfalfa	---	---	---	---	---	2.52
Mixed fertilizer	Cwt.	2.25	3.20	7.20	20	1.44
Dust and poison	Lb.	19	.12	2.28	12	.27
Water	Acre	1.0	2.20	2.20	100	2.20
Baling wire	Lb.	32.0	.12	3.84	10	.26
Baling twine	Lb.	14.0	.30	4.20	31	1.30
Total annual charge						7.99

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seeding (annual charge to alfalfa)	Acre	1.0	2.00	2.00	10	2/ .02
Baling	Acre	3/ 3.0	4.00	12.00	6	.72
Total contract work						.74

1/ Estimated.

2/ Allocated one-half the cost to the nurse crop.

3/ One acre times average number of cuttings.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area VI-D1, southeastern Idaho and central Utah, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Establish seeding:								
Total alfalfa 1/	---	---	---	---	---	6.04	2.56	1.63
Annual 2/	---	---	---	---	---	1.51	.64	.41
Ditch	---	1.0	0.75	0.68	52	.39	.35	---
Ditch, horses	---	1.0	.65	.75	20	.13	---	.15
Ditch by hand	---	1.0	.55	---	29	.16	---	---
Fertilize, spreader	10-foot	1.0	.66	.58	16	.11	.09	---
Fertilize, spreader, h.	9-foot	1.0	.70	1.19	4	.03	---	.05
Irrigate	---	3.9	1.56	---	100	6.08	---	---
Dust and poison	12-foot	1.2	.60	.54	7	.05	.05	---
Dust and poison, horses	20-foot	1.0	.26	.48	5	.01	---	.02
Total preharvest						8.47	1.13	.63
Mow	7-foot	3.0	.56	.51	75	1.26	1.15	---
Mow, horses	5-foot	3.0	1.28	2.33	25	.96	---	1.75
Rake, side-delivery	---	3.0	.63	.58	58	1.10	1.01	---
Rake, dump, horses	10-foot	3.0	.90	1.64	42	1.13	---	2.07
Bunch	10-foot	3.0	.55	.50	10	.16	.15	---
Bunch, horses	10-foot	3.0	.76	1.39	23	.52	---	.96
Bunch by hand	---	3.0	1.10	---	10	.33	---	---
Haul loose hay	---	3.0	6.68	1.60	44	8.82	2.11	---
Haul loose hay, horses	---	3.0	4.62	6.04	15	2.08	---	2.72
Bale, windrow	---	3.0	1.42	.87	35	1.49	.91	---
Bale, windrow, contract	---	3.0	1.42	.87	6	.26	.16	---
Haul bales, truck	---	3.0	3.46	1.58	38	3.94	---	---
Haul bales, horses	---	3.0	3.54	2.71	3	.32	---	.24
Total harvest						22.37	5.49	7.74
Total 3/						30.84	6.62	8.37

1/ Nearly all of the farms in this area seeded hay crops with a nurse crop. As a result, the total given here is one-half of the total required jointly to establish the seeding and the nurse crop.

2/ The estimated average life of alfalfa hay seedings in this area is approximately 4 years. The labor and power and machinery charged to establishing the seeding are prorated annually to the hay crop according to the average life of seeding.

3/ In addition, truck use averaged 1.80 hours an acre.

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D3, 1950

The data presented here are based on a survey made in 1951 of 32 farms producing alfalfa hay in south central Colorado. These farms are located in type-of-farming area VI-D3, a general farming area in the San Luis Valley of Colorado. The particular farms surveyed are quite diversified, producing livestock, hay, small grains, and potatoes.

As nearly all of the alfalfa in this area is seeded with a nurse crop, half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop, and a sixth of this is charged annually to the hay crop. All additional materials, such as alfalfa seed, and man labor, power, and machinery used directly in establishing the hay crop, are also prorated to the annual charges for the hay crop according to the estimated life of the seeding. Farmers reported that seedings of alfalfa hay usually lasted 6 years.

The farms surveyed averaged about 440 acres per farm. Cropland comprised about 295 acres. In 1950, 57 acres were in alfalfa hay, and the yield averaged about 2 tons per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 10 to 33; the most common was about 20.

Materials used and contract work hired, alfalfa hay (irrigated), area VI-D3, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Seed	Lb.	10.2	0.62	6.32	100	6.32
Water, ditch	Acre	1.0	1.00	1.00	100	[1] .50
Water, pump	Acre	1.0	2.65	2.65	100	[1] 1.32
Total for establishment						8.14
Annual charge to alfalfa	---	---	---	---	---	1.36
Water, ditch	Acre	1.0	1.00	1.00	[2] 92	.92
Water, pump	Acre	1.0	2.65	2.65	35	.93
Twine, baler	Lb.	5.7	.30	1.71	32	.55
Wire, baler	Lb.	15.4	.12	1.85	28	.52
Total annual charge						4.28

CONTRACT WORK HIRED

Baling [3]	Bale	57.1	.14	7.99	23	1.84
Hauling	Ton	2.0	1.47	2.94	31	.91
Total contract work						2.75

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[1] Allocated one-half the cost to the nurse crop.

[2] Eight percent of the acreage was subirrigated with no cost for water.

[3] Cost includes baler twine.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area VI-D3, south central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding:							
Total alfalfa 1/	---	---	---	---	---	2.16	1.25
Annual 2/	---	---	---	---	---	.36	.21
Chisel	4-foot	1.0	1.10	1.05	3	.03	.03
Harrow, springtooth	8-foot	2.0	.40	.37	2	.02	.01
Harrow, spiketooth	15-foot	1.0	.23	.21	3	.01	.01
Ditch	6-foot	1.0	.08	.08	45	.04	.04
Irrigate	---	3.0	.57	---	3/ 92	1.57	---
Total preharvest						2.03	.30
Mow	7-foot	2.0	.48	.44	100	.96	.88
Rake, side-delivery	7-foot	2.0	.45	.41	36	.32	.30
Rake, side-delivery	10-foot	2.0	.39	.36	64	.50	.46
Bale, pick up	---	2.0	.79	.45	60	.95	.54
Bale, contract	---	2.0	.79	.45	23	.36	.21
Haul bales, truck	---	2.0	1.50	.60	52	1.56	---
Haul bales, truck, c.	---	2.0	1.36	.48	31	.84	---
Bunch, dumprake	10-foot	3.2	.30	.27	13	.12	.11
Buckrake	12-foot	2.0	.55	.53	17	.19	.18
Stack, overshot	---	2.0	1.10	.53	17	.37	.18
Total harvest						6.17	2.86
Total 4/						8.20	3.16

1/ In this area nearly all of the farms seeded hay crops with a nurse crop. As a result, the total given here is one-half of the total required jointly to establish the seeding and the nurse crop.

2/ The estimated average life of an alfalfa hay seeding in this area is approximately 6 years. The labor, power, and machinery charged to establishing the seeding are prorated annually to the hay crop according to the average life of the seeding.

3/ Eight percent of the acreage was subirrigated with no charge for labor.

4/ In addition, truck use averaged 0.92 hour an acre.

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of 29 farms producing alfalfa hay in southeastern Colorado. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

As nearly all of the alfalfa in this area is seeded with a nurse crop, half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop, and a sixth of this is charged annually to the hay crop. All additional materials, such as alfalfa seed, and man labor, power, and machinery used directly in establishing the hay crop, are also prorated to the annual charges for the hay crop according to the estimated life of the seeding. Farmers reported that seedings of alfalfa hay usually lasted 6 years.

The farms surveyed averaged about 279 acres per farm. Cropland comprised about 225 acres. In 1950, 61 acres were in alfalfa hay, and the yield averaged about 3.6 tons per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 10 to 26; the most common was about 18.

Materials used and contract work hired, alfalfa hay (irrigated), area VI-D4, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Seed	Lb.	14	0.62	8.68	100	8.68
Mixed fertilizer	Cwt.	1.0	3.50	3.50	4	1/ .07
Water	Acre	1.0	2.00	2.00	100	1/1.00
Total for establishment						9.75
Annual charge to alfalfa:	---	---	---	---	---	1.62
Water	Acre	1.0	2.00	2.00	2/92	1.84
Twine, baler	Lb.	10.2	.30	3.06	11	.34
Wire, baler	Lb.	26.1	.12	3.13	16	.50
Total annual charge						4.30

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Baling 3/	Bale	96	.18	17.28	5	.86
Total contract work						.86

1/ Allocated one-half the cost to the nurse crop.
2/ Eight percent of the acreage was subirrigated with no cost for water.
3/ Cost includes baler twine.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding:							
Total alfalfa [1]	---	---	---	---	---	3.21	1.14
Annual [2]	---	---	---	---	---	.53	.19
Ditch	6-foot	1.9	0.10	0.09	37	.07	.06
Irrigate	---	3.1	1.20	---	[3] 92	3.42	---
Total preharvest						4.02	.25
Mow	7-foot	2.8	.39	.37	94	1.02	.98
Mow & rake, side-del.	7-foot	2.8	.64	.62	6	.11	.10
Rake, dump	12-foot	2.8	.31	.28	30	.26	.23
Rake, side-delivery	7-foot	2.8	.32	.29	37	.33	.30
Rake, side-delivery	10-foot	2.8	.30	.27	28	.24	.21
Buckrake, autobuck	14-foot	2.8	.25	.23	14	.10	.09
Buckrake	12-foot	2.8	.39	.36	54	.59	.55
Stack, power loader	---	2.8	.74	.48	43	.89	.58
Stack, loader, truck	---	2.8	.41	.34	25	.29	---
Bale, pick up	---	2.8	.85	.54	27	.64	.41
Bale, contract	---	2.8	.85	.54	5	.12	.08
Haul & stack bales	---	2.8	.84	.55	26	.61	.40
Total harvest						5.20	3.93
Total [4]						9.22	4.18

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[1] In this area nearly all of the farms seeded hay crops with a nurse crop. As a result, the total given here is one-half of the total required jointly to establish the seeding and the nurse crop.

[2] The estimated average life of an alfalfa hay seeding in this area is approximately 6 years. The labor, power, and machinery charged to establishing the seeding are prorated annually to the hay crop according to the average life of the seeding.

[3] Eight percent of the acreage was subirrigated with no charge for labor.

[4] In addition, truck use averaged 0.24 hour an acre.

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, OREGON, 1950

The data presented here are based on a survey made in 1951 of 17 farms producing alfalfa hay under irrigation in central Oregon. These farms are located in type-of-farming area VI-D7, an area composed of irrigated valleys scattered throughout the western Mountain region. Livestock and specialized irrigated crops are the most important enterprises in these valleys.

Nearly all of the alfalfa in this area is seeded with a nurse crop. Farmers reported that seedings of alfalfa hay usually lasted 4 years. As a result, half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop, and a fourth of this is charged annually to the hay crop. All additional materials, such as alfalfa seed and man labor, power, and machinery used directly in establishing the hay crop, are also prorated to the annual charges for the hay crop according to the estimated life of the seeding.

The farms surveyed averaged about 183 acres per farm. Cropland comprised about 94 acres. In 1950, 31 acres were in alfalfa hay, and the yield averaged 3.3 tons per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 7 to 28; the most common was about 16.

Materials used and contract work hired, alfalfa hay (irrigated), area VI-D7, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Seed	Lb.	13.0	0.82	10.66	100	10.66
Nitrate fertilizer (20-0-0)	Cwt.	.85	3.80	3.23	19	1/ .30
Phosphate fertilizer(0-18-0)	Cwt.	2.00	1.90	3.80	44	1/ .84
Gypsum	Cwt.	2.00	.90	1.80	10	.18
Sulphur	Cwt.	.50	2.25	1.12	27	.30
Water	Acre	1.0	3.35	3.35	100	1/1.68
Total for establishment						13.96
Annual charge to alfalfa:	---	---	---	---	---	3.49
Manure	Ton	5	2/2.00	10.00	5	.50
Mixed fertilizer	Cwt.	1.20	4.45	5.34	10	.53
Phosphate fertilizer(0-18-0)	Cwt.	2.45	1.90	4.66	46	2.14
Sulphur	Cwt.	.55	2.25	1.24	39	.48
Gypsum	Cwt.	1.30	.90	1.17	65	.76
Water	Acre	1.0	3.55	3.55	100	3.55
Twine, baler	Lb.	9.4	.32	3.01	14	.42
Wire, baler	Lb.	24.0	.13	3.12	31	.97
Total annual charge						12.84

CONTRACT WORK HIRED

Baling 3/	Bale	88	.20	17.60	29	5.10
Total contract work						5.10

1/ Allocated one-half the cost to the nurse crop.

2/ Estimated.

3/ Cost includes baler twine.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area VI-D7, central Oregon, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding:							
Total alfalfa 1/	---	---	---	---	---	5.03	2.97
Annual 2/	---	---	---	---	---	1.26	.74
Apply manure, spreader	60-bu.	1.0	4.07	1.85	5	.20	.09
Fertilize, spreader	10-foot	1.2	.50	.44	82	.49	.43
Harrow, springtooth	6-foot	1.7	.77	.70	29	.38	.35
Corrugate	6-foot	1.0	1.18	1.08	1	.01	.01
Irrigate	---	6.9	.35	---	100	2.41	---
Total preharvest						4.75	1.62
Mow	6-foot	2.2	.76	.69	91	1.52	1.38
Mow, horses	5-foot	2.2	1.85	3.54	9	.37	---
Rake, dump, horses	8-foot	2.2	1.53	2.93	7	.24	---
Rake, dump	10-foot	2.2	.75	.68	33	.54	.49
Rake, side-delivery	10-foot	2.2	.70	.64	60	.92	.85
Bale, pick up	---	2.2	1.12	.68	45	1.11	.67
Bale, contract	---	2.2	1.12	.68	29	.71	.43
Haul bales 3/	---	2.2	1.86	1.48	25	1.02	.81
Haul bales, truck	---	2.2	2.33	1.01	40	2.05	---
Shock	---	2.2	1.46	---	1	.03	---
Load and haul loose hay	---	2.2	3.75	2.11	22	1.81	1.02
Haul loose hay, power loader	---	2.2	2.94	1.41	4	.26	.12
Total harvest						10.58	5.77
Total 4/						15.33	7.39

1/ In this area nearly all of the farms seeded hay crops with a nurse crop. As a result, the total given here is one-half of the total required jointly to establish the seeding and the nurse crop.

2/ The estimated average life of an alfalfa hay seeding in this area is approximately 4 years. The labor, power, and machinery charged to establishing the seeding are prorated annually to the hay crop according to the average life of the seeding.

3/ Nine percent of hay was sold baled in the field.

4/ In addition, horse work averaged 1.15 hours an acre, and truck use averaged 0.89 hour an acre.

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, 1952

The data presented here are based on a survey made in 1952 of approximately 45 farms that produced alfalfa hay under irrigation in 1952 in central Wyoming. These farms are located in type-of-farming area VI-D7 which is comprised of comparatively small irrigated valleys in the Intermountain region. The particular type-of-farming area in which these farms lie is located along Muddy Creek and Wind and Big Horn Rivers in central Wyoming. Much of the farming area is under newly established reclamation projects and many of the farms have been in operation only a few years. General farming prevails in the area.

Alfalfa hay is grown by nearly all of the farmers in the area, and the production practices differ little from farm to farm. About 40 percent of the farmers got three cuttings of hay during the season. As nearly all of the alfalfa in this area is seeded with a nurse crop, half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop. All additional materials, man labor, and power and machinery used directly in establishing the hay crop are prorated also to the annual charges for the hay crop according to the estimated life of the seeding. Farmers reported that hay seeding usually lasted 5 years.

The farms averaged about 220 acres per farm. Cropland comprised about 162 acres. In 1952, about 39 acres of alfalfa were cut for hay; and the average yield was approximately 2.7 tons per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 26; the most common was about 20.

Materials used and contract work hired, alfalfa hay, (irrigated), area VI-D7, 1952 1/

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Alfalfa seed	Lb.	10	0.65	6.50	100	6.50
Phosphate fertilizer(0-20-0)	Cwt.	1.00	2.00	2.00	8	2/ .08
Phosphate fertilizer(0-43-0)	Cwt.	1.70	3.90	6.63	33	2/1.10
Spray (2,4-D)	Pt.	1.0	.75	.75	10	2/ .04
Water	Acre	1.0	2.10	2.10	100	2/1.05
Total for establishment						8.77
Annual charge to alfalfa:	---	---	---	---	---	1.75
Phosphate fertilizer(0-20-0)	Cwt.	1.00	2.00	2.00	8	.16
Phosphate fertilizer(0-43-0)	Cwt.	1.70	3.90	6.63	33	2.19
Dieldrin	Pt.	2.0	1.00	2.00	13	.26
Water	Acre	1.0	2.10	2.10	100	2.10
Twine, baler 3/	Lb.	8.1	.42	3.40	24	.82
Total annual charge						7.28

1/ Farmers in this area hire practically no machine work on the hay crop. Instead, they exchange work on a large scale.

2/ Allocated one-half the cost to the nurse crop.

3/ Approximately 3 pounds of twine were used per ton of hay baled.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area VI-D7, central Wyoming, 1952

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding:							
Total alfalfa 1/	---	---	---	---	---	9.32	2.20
Annual 2/	---	---	---	---	---	1.86	.44
Fertilize	10-foot	1.0	0.49	0.43	41	.20	.18
Harrow, springtooth	9-foot	1.0	.53	.48	43	.23	.21
Harrow	15-foot	1.1	.28	.25	17	.05	.05
Ditch	---	1.0	.33	.22	75	.25	.16
Corrugate	10-foot	1.0	.32	.29	70	.22	.20
Irrigate	---	3.5	4.36	---	100	15.26	---
Spray	40-foot	1.0	.22	.20	13	.03	.03
Total preharvest						18.10	1.27
Cut	7-foot	2.3	.59	.54	100	1.36	1.24
Rake, side-delivery	---	2.3	.54	.49	100	1.24	1.13
Bale	---	2.3	.56	.54	24	.31	.30
Haul and stack	---	2.3	2.24	1.30	76	3.91	2.27
Haul, truck	1½-ton	2.3	1.08	.50	24	.60	---
Total harvest						7.42	4.94
Total 3/						25.52	6.21

1/ In this area nearly all of the farms seeded hay crops with a nurse crop. As a result, the total given here is one-half of the total required jointly to establish the seeding and the nurse crop.

2/ The average life of an alfalfa hay seeding in this area is approximately 5 years. The labor, power, and machinery charged to establishing the seeding are prorated annually to the hay crops according to the life of the seeding.

3/ In addition, truck use averaged 0.28 hour an acre.

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F1, 1950

The data presented here are based on a survey made in 1950 of approximately 45 farms producing alfalfa hay under irrigation in 1950, in north central Wyoming and south central Montana. These farms are located in type-of-farming area IX-F1, a general farming and specialized cropping area in the irrigated valleys along the Big Horn, Shoshone, and Yellowstone Rivers in Montana and Wyoming. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

Nearly all of the alfalfa in this area is seeded with a nurse crop. Farmers reported that hay seeding usually lasted 4 years. As a result, one-half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop. All additional materials, man labor, and power and machinery used directly in establishing the hay crop are prorated also to the annual charges for the hay crop according to the estimated life of the seeding.

The farms averaged about 170 acres per farm. Cropland comprised about 142 acres. In 1950, about 31 acres were in alfalfa cut for hay, and the average yield was approximately 3.3 tons per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 13 to 26; the most common was about 19.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Seed	Lb.	12	0.55	6.60	100	6.60
Manure	Ton	10	1/2.00	20.00	13	2/1.30
Total for establishment						7.90
Annual charge to alfalfa	---	---	---	---	---	1.98
Mixed fertilizer	Cwt.	1.50	3.40	5.10	25	1.28
Dust and poison	Lb.	19	.12	2.28	17	.39
Water	Acre	1.0	2.85	2.85	100	2.85
Baling twine	Lb.	11.6	.30	3.48	8	.28
Baling wire	Lb.	26.4	.12	3.17	5	.16
Total annual charge						6.94

CONTRACT WORK HIRED

Dusting	Acre	1.0	3.00	3.00	13	.39
Baling	Acre	3/3.0	4.25	12.75	2	.26
Total contract work						.65

1/ Estimated.
2/ Allocated one-half the cost to the nurse crop.
3/ One acre times average number of cuttings.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area IX-F1, north central Wyoming and south central Montana, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding:							
Total alfalfa 1/	---	---	---	---	---	5.27	2.31
Annual 2/	---	---	---	---	---	1.32	.58
Ditch	---	1.0	0.75	0.70	99	.74	.69
Ditch by hand	---	1.0	.40	---	13	.05	---
Fertilize, spreader	10-foot	1.0	.52	.45	15	.08	.07
Irrigate	---	5.0	2.11	---	100	10.55	---
Dust and poison	16-foot	1.0	.30	.28	17	.05	.05
Dust, contract	---	1.0	.30	.28	13	.04	.04
Total preharvest						12.83	1.43
Mow	7-foot	3.0	.51	.46	100	1.53	1.38
Rake, side-delivery	---	3.0	.48	.44	100	1.44	1.32
Bunch	10-foot	3.5	.55	.50	84	1.61	1.47
Bunch, horses	10-foot	3.5	.76	1.39	3	.08	---
Haul and stack, J-hawk	---	3.0	1.70	.66	84	4.28	1.66
Haul and stack	---	3.0	3.35	1.34	3	.30	.12
Bale, windrow	---	3.0	1.42	.87	11	.47	.29
Bale, windrow, contract	---	3.0	1.42	.87	2	.09	.05
Haul bales, truck	---	3.0	2.92	.84	13	1.14	---
Total harvest						10.94	6.29
Total 3/						23.77	7.72

1/ Nearly all of the farms in this area seeded hay crops with a nurse crop. As a result, the total given here is one-half of the total required jointly to establish the seeding and the nurse crop.

2/ The estimated average life of alfalfa hay seedings in this area is approximately 4 years. The labor and power and machinery charged to establishing the seeding are prorated annually to the hay crop according to the average life of seeding.

3/ In addition truck use averaged 0.33 hour an acre and horse work 0.15 hour an acre.

ALFALFA HAY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F2, 1951

The data presented here are based on a survey made in 1951 of approximately 55 farms producing alfalfa hay under irrigation in 1951, in southeastern Wyoming and west central Nebraska. These farms are located in type-of-farming area IX-F2, a specialized crop and general farming area along the North Platte and Laramie Rivers. The particular farms surveyed are diversified, producing livestock, hay, corn, small grains, and specialized crops.

Nearly all of the alfalfa in this area is seeded with a nurse crop. Farmers reported that hay seeding usually lasted 4 years. As a result, one-half of the man labor, power and machinery, and materials used jointly in establishing the hay seeding and the nurse crop is charged to the hay crop. All additional materials, man labor, and power and machinery used directly in establishing the hay crop are prorated also to the annual charges for the hay crop according to the estimated life of the seeding.

The farms averaged about 214 acres per farm. Cropland comprised about 147 acres. In 1951, about 31 acres were in alfalfa cut for hay, and the average yield was approximately 2.9 tons per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 26. There were two common sizes: 19 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Seed	Lb.	12	0.55	6.60	100	6.60
Total for establishment						6.60
Annual charge to alfalfa	---	---	---	---	---	1.65
Mixed fertilizer (12-24-0)	Cwt.	2.00	4.15	8.30	4	.33
Nitrate fertilizer (33-0-0)	Cwt.	1.00	4.25	4.25	2	.08
Phosphate fertilizer (0-42-0)	Cwt.	1.30	3.50	4.55	49	2.23
Dust	Lb.	30	.04	1.20	7	.08
Water	Acre	1.0	1.90	1.90	100	1.90
Baling twine	Lb.	10.2	.30	3.06	16	.49
Total annual charge						6.76

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Baling	Acre	1/ 3.0	4.25	12.75	16	2.04
Total contract work						2.04

1/ One acre times average number of cuttings.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa hay, irrigated, area IX-F2, southeastern Wyoming and west central Nebraska, 1951

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding:							
Total alfalfa 1/	---	----	---	---	---	5.76	1.60
Annual 2/	---	---	---	---	---	1.44	.40
Ditch	---	1.2	0.42	0.25	79	.40	.24
Ditch, by hand	---	1.3	.32	---	13	.05	---
Fertilize, spreader	10-foot	1.0	.47	.41	55	.26	.23
Irrigate	---	3.9	3.45	---	100	13.46	---
Dust	24-foot	1.0	.27	.25	7	.02	.02
Total preharvest						15.63	.89
Mow	7-foot	3.0	.52	.47	100	1.56	1.41
Rake, side-delivery	---	3.0	.46	.42	100	1.38	1.26
Bunch, dump-rake	---	3.0	.54	.49	12	.19	.18
Haul loose hay		3.0	1.72	.55	84	4.33	1.39
Bale, contract		3.0	1.74	1.04	16	.84	.50
Haul bales		3.0	2.10	.93	16	1.01	.45
Total harvest						9.31	5.19
Total						30.13	6.08

1/ Nearly all of the farms in this area seeded hay crops with a nurse crop. As a result the total given here is one-half of the total required jointly to establish the seeding and the nurse crop.

2/ The estimated average life of alfalfa hay seedings in this area is approximately 4 years. The labor, power and machinery charged to establishing the seeding are prorated annually to the hay crop according to the average life of seeding.

ALFALFA SEED (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, 1952

The data presented here are based on a survey made in 1952 of approximately 40 farms that produced alfalfa seed under irrigation in 1952 in central Wyoming. These farms are located in type-of-farming area VI-D7, which is comprised of comparatively small irrigated valleys in the Intermountain region. The particular type-of-farming area in which these farms lie is located along Muddy Creek and Wind River in central Wyoming. Much of the farming area is under newly established reclamation projects and many of the farms have been in operation only a few years. General farming prevails in the area.

The alfalfa seed crop is one of the important cash crops in the area. Although alfalfa seed is grown generally throughout the area the major production tends to be confined to local areas. In some of these localities nearly every farmer grows alfalfa seed, which is frequently the most important enterprise.

As nearly all of the alfalfa in this area is seeded with a nurse crop, half of the man labor, power and machinery, and materials used jointly in establishing the seeding and the nurse crop is charged to the seed crop. All additional materials, man labor and power and machinery used directly in establishing the seed crop are prorated also to the annual charges for the seed crop according to the estimated life of the seeding. Although the 1952 crop was only the second crop grown in two of the important sections of the area, it was estimated that alfalfa seedings would last about 5 years.

The farms surveyed averaged about 180 acres per farm. In 1952, approximately 145 acres were in crops, including 75 acres in alfalfa seed. Although yields of seed were highly variable, largely because of crop losses from hail, rain, insects, and related causes, the average was about 210 pounds per acre in 1952.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 26; the most common was about 20.

Materials used and contract work hired, alfalfa seed (irrigated), area VI-D7, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Alfalfa seed	Lb.	2.5	0.68	1.70	100	1.70
Manure	Ton	7	1/ 2.00	14.00	3	2/ .21
Mixed fertilizer (10-20-0)	Cwt.	1.25	4.45	5.56	17	2/ .48
Nitrate fertilizer (33-0-0)	Cwt.	1.00	5.00	5.00	5	2/ .12
Spray (2, 4-D)	Pt.	1.0	.75	.75	10	2/ .04
Water	Acre	1.0	2.10	2.10	100	2/ 1.05
Total for establishment						3.60
Annual charge to alfalfa:		---	---	---	---	.72
Nitrate fertilizer (33-0-0)	Cwt.	1.2	5.00	6.00	3	.18
Phosphate fertilizer (0-20-0)	Cwt.	1.4	2.00	2.80	20	.56
Chlordane 3/	Pt.	3.25	1.25	4.06	75	3.04
Toxaphene 4/	Pt.	2.0	.58	1.16	58	.67
Dieldrin 5/	Pt.	2.1	1.00	2.10	37	.78
Spray (25% DDT) 6/	Qt.	2.0	.70	1.40	26	.36
Dust (10% DDT) 7/	Lb.	25	.13	3.25	13	.42
Water	Acre	1.0	2.00	2.00	100	2.00
Total annual charge						8.73

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying and dusting, plane 8/	Acre	1.6	1.00	1.60	84	1.34
Total contract work						1.34

1/ Estimated.

2/ Allocated one-half the cost to the nurse crop.

3/ An average of 1.7 pints of chlordane was used per application per acre and 1.9 applications of chlordane were made.

4/ An average of 2 pints of toxaphene was used per acre for each application. One application was made.

5/ An average of 1.4 pints of dieldrin was used per acre for each application. An average of 1.5 applications was made.

6/ An average of 2 quarts of 25 percent DDT was applied per acre each time. One application was made.

7/ An average of 25 pounds of 10 percent DDT was applied per acre each time. One application was made.

8/ One acre times average number times over.

Man labor, power, and machinery used by operation in producing and harvesting alfalfa seed, irrigated, area VI-D7, central Wyoming, 1952

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding:							
Total alfalfa 1/	---	---	---	---	---	9.32	2.20
Annual 2/	---	---	---	---	---	1.86	.44
Rake and burn straw	---	1.0	0.37	0.26	45	.17	.12
Disk	8-foot	1.0	.44	.42	37	.16	.16
Harrow, springtooth	9-foot	1.0	.43	.39	32	.14	.12
Harrow	20-foot	1.2	.20	.18	12	.03	.03
Corrugate	5-row	1.0	.37	.34	95	.35	.32
Fertilize	10-foot	1.0	.49	.43	23	.11	.10
Irrigate	---	2.3	4.15	---	100	9.54	---
Spray	24-foot	1.7	.25	.20	90	.38	.31
Dust	24-foot	1.0	.38	.25	13	.05	.03
Spray & dust, plane, c. 3/	---	1.6	.14	---	84	.18	---
Rogue	---	1.8	.65	---	87	1.02	---
Total preharvest						13.99	1.63
Cut 4/	7-foot	1.0	.67	.61	26	.17	.16
Combine	---	1.0	2.82	2.16	100	2.82	2.16
Haul, truck 5/	---	1.0	.54	.49	100	.54	---
Total harvest						3.53	2.32
Total 6/						17.52	3.95

1/ Nearly all the seeding crops in this area are started with a nurse crop. As a result, the total given here is one-half of the total required jointly to establish the seeding and nurse crop.

2/ Although much of the area in which schedules were obtained has been farmed little more than two years, farmers estimated that seedings of alfalfa would last about 5 years.

3/ Two flagmen assisted the pilot in spraying the field and one man loaded the plane at the airport. Approximately 8 hours of man labor, excluding the pilot, were used for each 75 acres sprayed. The hours given above do not include those for the plane or its pilot.

4/ Approximately 26 percent of the acreage was either cut or cut and curled and combined from the swath.

5/ Seed was trucked to market at various times and with various carriers depending on the quantity being taken to market at the time.

6/ In addition, truck use averaged 0.49 hour an acre.

AUSTRIAN WINTER PEAS: RESOURCES USED IN PRODUCTION, AREA IV-E1, 1950

The data presented here are based on a survey made in 1950 of 31 farms producing Austrian winter peas in the Willamette Valley in western Oregon. These farms are located in type-of-farming area IV-E1, a dairy and mixed-farming area ranging from the Puget Sound area south through the Willamette Valley.

The farms surveyed averaged about 344 acres per farm. Cropland comprised about 270 acres. In 1950, 33 acres were in Austrian winter peas, and the yield per acre averaged 2,183 pounds field run and 1,748 pounds cleaned.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 16 to 32; the most common was about 22.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.3	2.85	3.70	74	2.74
Purchased seed	Bu.	1.3	3.30	4.29	26	1.12
Clean and treat seed	Bu.	1.3	.25	.32	67	.21
Mixed fertilizer	Cwt.	1.15	4.00	4.60	8	.37
Nitrate fertilizer(21-0-0)	Cwt.	1.00	3.20	3.20	4	.13
Nitrate fertilizer(33-0-0)	Cwt.	1.10	4.15	4.56	5	.23
Phosphate fertilizer	Cwt.	1.00	1.90	1.90	10	.19
Gypsum	Cwt.	1.20	.85	1.02	32	.33
Dust, DDT	Lb.	17	.08	1.36	89	1.21
Sacks, replacement	No.	17	.23	3.91	32	1.25
Sack strings	No.	17	.01	.17	55	.09
Total materials						7.87

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Fertilizing, plane	Acre	1.0	1.00	1.00	14	.14
Dusting	Acre	1.0	1.00	1.00	14	.14
Dusting, plane	Acre	1.0	1.50	1.50	75	1.12
Combining	Acre	1.0	6.00	6.00	10	.60
Hauling	Cwt.	21.8	.08	1.74	13	.23
Total contract work						2.23

Man labor, power, and machinery used by operation in producing and harvesting Austrian winter peas, area IV-E1, western Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-14 inch	1.0	1.14	1.09	20	0.23	0.22
Plow, moldboard	3-14 inch	1.0	.98	.93	35	.34	.33
Plow, moldboard	4-16 inch	1.0	.65	.62	18	.12	.11
Disk, tandem	7-foot	1.7	.49	.47	42	.35	.34
Disk, tandem	10-foot	1.6	.33	.31	22	.12	.11
Spread gypsum	10-foot	1.0	.24	.21	25	.06	.05
Fertilize, spreader	10-foot	1.0	.32	.28	8	.03	.02
Harrow, spiketooth	20-foot	2.2	.20	.18	38	.17	.15
Roll	7-foot	3.0	.47	.43	3	.04	.04
Seed, drill	10-foot	1.0	.34	.32	100	.34	.32
Fertilize, plane, c.	---	1.0	---	---	14	---	---
Harrow, spiketooth	20-foot	1.0	.20	.18	22	.04	.04
Dust, contract	---	1.0	.22	.19	14	.03	.03
Dust, plane, contract	---	---	---	---	75	---	---
Total preharvest						1.87	1.76
Swath	7-foot	1.0	.56	.51	65	.36	.33
Combine, sacked	6-foot	1.0	3.12	1.44	30	.94	.43
Combine, bulk	6-foot	1.0	1.56	1.44	14	.22	.20
Combine, sacked	12-foot	1.0	2.05	.94	7	.14	.07
Combine, sacked, c.	12-foot	1.0	2.05	.94	6	.12	.06
Combine, s.p., sacked	12-foot	1.0	2.05	.94	13	.27	---
Combine, s.p., bulk	12-foot	1.0	.97	.90	26	.25	---
Combine, s.p., bulk, c.	12-foot	1.0	.97	.90	4	.04	---
Haul, sacked, truck	1½-ton	1.0	.89	.34	41	.36	---
Haul, bulk, truck	1½-ton	1.0	.33	.30	45	.15	---
Haul, truck, contract	1½-ton	1.0	.71	.33	13	.09	---
Total harvest						2.94	1.09
Total 1/						4.81	2.85

1/ In addition, truck use averaged 0.31 hour an acre and self-propelled combines 0.39 hour an acre.

Note: c. = operation performed on contract basis.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A1, 1949

The data presented here are based on a survey made in 1950 of 21 farms producing irrigated barley. These farms are located in type-of-farming area I-A1, a fruit and mixed-farming area in the Yakima River Valley of central Washington.

The farms surveyed averaged about 169 acres per farm. Cropland comprised about 141 acres. In 1949, 24 acres were in irrigated barley, and the yield averaged approximately 59 bushels per acre.

Tractors and motorized equipment provided most of the power used on these farms, although horses were used for hauling bundles on some farms where barley was threshed. The drawbar-horsepower rating of the tractors ranged from 13 to 29; the most common was about 19.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	2.0	1.50	3.00	80	2.40
Purchased seed	Bu.	2.0	2.05	4.10	20	.82
Seed treating	Bu.	2.0	.12	.24	35	.08
Manure	Ton	8	[1] 2.00	16.00	8	1.28
Mixed fertilizer (16-20-0)	Cwt.	2.00	3.75	7.50	22	1.65
Nitrate fertilizer (33-0-0)	Cwt.	1.00	3.90	3.90	5	.20
Water	Acre	1.0	4.75	4.75	100	4.75
Binder twine	Lb.	4.0	.30	1.20	84	1.01
Sacks	No.	26	.17	4.42	8	.35
Sack strings	No.	26	.01	.26	8	.02
Total materials						12.56

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying (2,4-D)	Acre	1.0	[2] 2.10	2.10	3	.06
Binding	Acre	1.0	4.50	4.50	6	.27
Shocking	Acre	1.0	2.50	2.50	45	1.12
Combining	Acre	1.0	9.75	9.75	4	.39
Threshing	Bu.	59	.15	8.85	18	1.59
Hauling	Bu.	59	.05	2.95	25	.74
Total contract work						4.17

[1] Estimated. [2] Cost includes spray materials.

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area I-Al, central Washington, 1949

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	4.78	1.52	8	0.38	0.12
Plow, moldboard	1-16 inch	1.0	2.25	2.15	28	.63	.60
Plow, moldboard	2-14 inch	1.0	1.21	1.15	37	.45	.43
Plow, moldboard	3-16 inch	1.0	.74	.70	11	.08	.08
Renovate	8-foot	3.2	.43	.39	34	.47	.42
Disk, tandem	7-foot	1.5	.68	.65	88	.90	.86
Harrow, spiketooth	15-foot	2.1	.30	.27	82	.52	.47
Level, steel	9-foot	1.0	.44	.42	58	.26	.24
Cultipack	8-foot	1.0	.46	.42	18	.08	.08
Seed, drill	8-foot	1.0	.63	.58	48	.30	.28
Seed, drill	10-foot	1.0	.53	.48	52	.28	.25
Cultipack	10-foot	1.0	.44	.40	14	.06	.06
Corrugate	3-row	1.0	.60	.55	69	.41	.38
Corrugate	4-row	1.0	.48	.44	16	.08	.07
Irrigate	---	2.6	.83	---	100	2.16	---
Spray, contract	---	1.0	---	---	3	---	---
Total preharvest 1/						7.06	4.34
Bind	8-foot	1.0	1.95	.86	78	1.52	.67
Bind, contract	8-foot	1.0	1.95	.86	6	.12	.05
Shock by hand	---	1.0	1.98	---	20	.40	---
Shock by hand, contract	---	1.0	1.98	---	45	.89	---
Haul bundles	---	1.0	5.07	2.74	68	3.45	1.86
Haul bundles, horses	---	1.0	5.50	6.07	16	.88	---
Thresh	---	1.0	.89	.54	66	.59	.36
Thresh, contract	---	1.0	.89	.54	18	.16	.10
Haul grain, truck	1½-ton	1.0	.38	.33	38	.14	---
Haul, truck, contract	---	1.0	.38	.33	25	.10	---
Swath	8-foot	1.0	.71	.65	12	.09	.08
Combine	6-foot	1.0	1.96	1.36	12	.24	.16
Combine, contract	6-foot	1.0	1.96	1.36	4	.08	.05
Haul grain, truck	1½-ton	1.0	.59	.36	14	.08	---
Total harvest						8.74	3.33
Total 2/						15.80	7.67

1/ Excludes spraying done on a contract basis for which no rates were available.

2/ In addition, horse work averaged 0.97 hour an acre and truck use 0.26 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A5, 1952

The data presented here are based on a survey made in 1952 of approximately 40 farms producing barley under irrigation in 1952 in west central Colorado. These farms are located in type-of-farming area I-A5, which is comprised of comparatively small irrigated valleys at the foot of the Rocky Mountains in west central Colorado. Fruit and mixed farming predominates in this area. The farms are comparatively small units but are intensively operated.

The farms surveyed averaged about 135 acres per farm. In 1952, 118 acres were in crops, including 15 acres in barley. The average yield of barley was about 60 bushels an acre. Most farmers in this area grow small grains in their rotations partly as a supplement to their feeding operations and partly as a nurse crop for new seedings of alfalfa.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 27. Those with drawbar-horsepower ratings of 19 and 26 were most common.

.Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Cwt.	1.25	4.50	5.62	100	5.62
Manure	Ton	6	1/2.00	12.00	24	2.88
Mixed fertilizer(10-20-0)	Cwt.	2.00	4.05	8.10	8	.65
Nitrate fertilizer(33-0-0)	Cwt.	1.00	4.80	4.80	15	.72
Phosphate fertilizer(0-43-0)	Cwt.	1.25	3.75	4.69	14	.66
Spray (2, 4-D)	Pt.	1.0	.65	.65	5	.03
Water	Acre	1.0	2.20	2.20	100	2.20
Twine	Lb.	4.0	.35	1.40	17	.24
Total materials						13.00

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	6.50	6.50	17	1.10
Total contract work						1.10

1/ Estimated.

Man labor, power, and machinery used by operation in producing
and harvesting barley, irrigated, area I-A5,
west central Colorado, 1952

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	3.30	3.30	24	0.79	0.79
Plow, moldboard	1-16 inch	1.0	1.89	1.81	19	.36	.34
Plow, moldboard	2-14 inch	1.0	1.45	1.39	42	.61	.58
Disk, tandem	6-foot	2.0	.68	.65	33	.45	.43
Disk, tandem	8-foot	1.7	.52	.49	61	.54	.51
Harrow, spiketooth	10-foot	1.9	.43	.39	56	.46	.41
Fertilize	8-foot	1.0	.52	.45	20	.10	.09
Level	6-foot	1.3	.66	.63	28	.24	.23
Level	9-foot	1.9	.53	.50	72	.73	.68
Seed, drill	8-foot	1.0	.60	.55	49	.29	.27
Seed, drill	12-foot	1.0	.41	.38	51	.21	.19
Corrugate	9-foot	1.0	.48	.44	59	.28	.26
Ditch	---	1.0	.34	.31	60	.20	.19
Spray	16-foot	1.0	.65	.60	5	.03	.03
Irrigate	---	3.9	4.15	---	100	16.18	---
Total preharvest						21.47	5.00
Bind	7-foot	1.0	1.52	1.34	17	.26	.23
Shock	---	1.0	1.70	---	17	.29	---
Haul bundles	---	1.0	5.95	2.64	17	1.01	.45
Thresh	---	1.0	1.67	.69	17	.28	.12
Combine	6-foot	1.0	1.39	1.28	30	.42	.38
Combine, contract	6-foot	1.0	1.39	1.28	17	.24	.22
Combine	5-foot	1.0	1.88	1.36	27	.51	.37
Combine, self-propelled	12-foot	1.0	.70	.64	9	.06	---
Haul grain, truck	1½-ton	1.0	1.15	1.05	97	1.12	---
Total harvest						4.19	1.77
Total 1/						25.66	6.77

1/ In addition, truck use averaged 1.02 hours an acre and self-propelled combines 0.06 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-A3, 1950

The data presented here are based on a survey made in 1950 of approximately 45 farms producing barley under irrigation in 1950 in east central Utah. These farms are located in the irrigated valleys along the Colorado, Strawberry, and Green Rivers in Utah. These valleys comprise comparatively small portions of type-of-farming area II-A3, a seasonal migratory grazing area.

The particular farms surveyed are for the most part general farms, producing livestock, corn, and small grains. Some of the farmers operated additional grazing or nonirrigated units in connection with their irrigated land.

The farms surveyed averaged about 188 acres per farm. Cropland comprised about 120 acres. In 1950, approximately 9 acres were in barley, and the yield averaged 61 bushels per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 25; the most common was about 15.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.10	3.95	4.34	100	4.34
Manure	Ton	13	1/ 2.00	26.00	11	2.86
Phosphate fertilizer	Cwt.	1.00	3.25	3.25	9	.29
Binder twine	Lb.	3.7	.30	1.11	39	.43
Sacks	No.	5	.30	1.50	52	.78
Sack twine	Lb.	.4	.95	.38	23	.09
Water	Acre	1.0	2.10	2.10	100	2.10
Total materials						10.89

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	1.10	.20	.22	65	.14
Combining	Acre	1.0	6.00	6.00	35	2.10
Binding	Acre	1.0	3.50	3.50	15	.52
Threshing	Bu.	61	.12	7.32	39	2.85
Total contract work						5.61

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area II-A3, east central Utah, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	3.05	2.51	9	0.27	0.23	---
Apply manure, horses-sp.	60-bu.	1.0	9.32	10.05	2	.19	---	0.20
Plow, moldboard	2-16 inch	1.0	1.46	1.39	20	.29	.28	---
Plow, moldboard	2-14 inch	1.0	1.60	1.52	48	.77	.73	---
Plow, moldboard	1-16 inch	1.0	2.47	2.35	28	.69	.66	---
Plow, moldboard, horses	1-16 inch	1.0	6.18	16.30	4	.25	---	.65
Disk, tandem	7-foot	1.5	.79	.76	60	.71	.68	---
Fertilize, spreader	10-foot	1.0	.85	.55	9	.08	.05	---
Harrow, spiketooth	10-foot	1.9	.56	.51	70	.74	.68	---
Harrow, spiketooth, h.	10-foot	2.4	1.22	3.39	8	.23	---	.65
Level	8-foot	1.2	.68	.65	57	.47	.44	---
Level, horses	8-foot	1.2	1.40	3.50	7	.12	---	.29
Seed, drill	8-foot	1.0	.62	.55	83	.51	.46	---
Seed, drill, horses	8-foot	1.0	1.09	2.00	17	.19	---	.34
Harrow, spiketooth, h.	10-foot	1.8	1.22	3.39	3	.06	---	.18
Irrigate	---	2.7	2.44	---	100	6.59	---	---
Ditch	---	1.0	1.07	.92	88	.94	.81	---
Ditch, horses	---	1.0	1.81	1.66	12	.22	---	.20
Ditch, by hand	---	1.0	.85	---	30	.26	---	---
Total preharvest						13.58	5.02	2.51
Combine	6-foot	1.0	2.02	1.25	26	.53	.32	---
Combine, contract	6-foot	1.0	2.02	1.25	35	.71	.44	---
Bind	6-foot	1.0	2.01	1.25	19	.38	.24	---
Bind, horses	6-foot	1.0	1.90	4.00	5	.10	---	.20
Bind, contract	6-foot	1.0	2.01	1.25	15	.30	.19	---
Shock by hand	---	1.0	1.83	---	15	.27	---	---
Haul bundles	---	1.0	5.31	1.90	39	2.07	.74	---
Thresh, contract	---	1.0	2.40	1.10	39	.94	.43	---
Haul grain, truck	1½-ton	1.0	1.62	.92	89	1.44	---	---
Haul grain, horses	---	1.0	1.54	1.94	8	.12	---	.16
Total harvest						6.50	2.19	.36
Total 1/						20.08	7.21	2.87

1/ In addition, truck use averaged 0.82 hour per acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of approximately 30 farms producing irrigated barley in southeastern Colorado and northeastern New Mexico. These farms are located in irrigated valleys of type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 485 acres per farm. Cropland comprised about 175 acres. In 1950, 34 acres were planted to irrigated barley. Because of a severe water shortage in 1950, only about 40 percent of the acreage was harvested. The yield of 22 bushels per harvested acre also was considerably below the normal yield of about 32 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 9 to 31; the most common was about 17.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Bu.	1.5	1.75	2.62	100	2.62
Ceresan	Bu.	1.5	.15	.22	56	.12
Formaldehyde	Pt.	.1	.60	.06	18	.01
Manure	Ton	14	1/2.00	28.00	8	2.24
Phosphate fertilizer (0-18-0)	Cwt.	3.00	2.00	6.00	1	.06
Water	Acre	1.0	1.80	1.80	100	1.80
Twine, binder	Lb.	3.0	.30	.90	1	.01
Total materials						6.86

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying 2/	Acre	1.0	3.10	3.10	5	.16
Combining	Acre	1.0	4.50	4.50	17	.76
Binding	Acre	1.0	2.50	2.50	1	.02
Threshing	Bu.	22	.10	2.20	1	.02
Total contract work						.96

1/ Estimated.

2/ Cost includes spray materials.

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area II-B2, southeastern Colorado and northeastern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	60-bu.	1.0	3.80	3.80	8	0.30	0.30
Plow, moldboard	1-16 inch	1.0	2.45	2.34	34	.83	.80
Plow, moldboard	2-14 inch	1.0	1.69	1.62	18	.30	.29
Plow, Graham	8-foot	2.1	.88	.84	29	.54	.51
Plow, one-way	8-foot	1.0	.51	.48	10	.05	.05
Disk, tandem	7-foot	1.5	.59	.57	51	.45	.44
Harrow, spiketooth	15-foot	2.3	.32	.29	68	.50	.46
Roll	10-foot	1.6	.43	.39	21	.14	.13
Level, steel	8-foot	2.2	.67	.64	56	.82	.79
Level, wood	10-foot	1.6	.44	.42	41	.29	.27
Drill	8-foot	1.0	.68	.62	50	.34	.31
Drill	10-foot	1.0	.55	.50	50	.28	.25
Ditch	7-foot	1.0	.12	.09	9	.01	.01
Corrugate	10-foot	1.0	.41	.38	82	.34	.31
Irrigate	---	[1] 2.3	.89	---	100	2.05	---
Spray, plane, contract	---	1.0	---	---	5	---	---
Total preharvest						7.24	4.92
Combine	6-foot	1.0	1.02	.94	[2] 82	.84	.77
Combine, contract	6-foot	1.0	1.02	.94	[2] 17	.17	.16
Haul, truck	1½-ton	1.0	.24	.22	[2] 94	.23	---
Bind, contract	6-foot	1.0	1.00	.88	[2] 1	.01	.01
Haul bundles	---	1.0	1.00	.92	[2] 1	.01	.01
Thresh, contract	28-incn	1.0	.56	.52	[2] 1	.01	.01
Total harvest						1.27	.96
Total [3]						8.51	5.88

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[1] Usual number of times over when normal amounts of water are applied.

[2] Harvested acreage only. Because of a severe shortage of irrigation water, only 40 percent of the planted acreage was harvested. Operators applied most of the available water to the higher value crops.

[3] In addition, truck use averaged 0.21 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA III-C3, 1950

The data presented here are based on a survey made in 1951 of 14 farms producing barley, winter wheat, and oats on irrigated land in east central Colorado. These farms are located in the western edge of the Colorado portion of type-of-farming area III-C3, a wheat-and-range-livestock area in the Central High Plains.

The farms surveyed averaged about 350 acres per farm. Cropland comprised about 309 acres. In 1950, 43 acres were in irrigated barley, and the yield averaged approximately 48 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 36; the most common was about 22.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.5	1.00	1.50	68	1.02
Purchased seed	Bu.	1.5	1.85	2.78	32	.89
Ceresan	Bu.	1.5	.03	.04	58	.02
Spray (2,4-D)	Pt.	.8	.62	.50	13	.06
Manure	Ton	15	1/ 2.00	30.00	28	8.40
Water	Acre	1.0	1.60	1.60	100	1.60
Twine	Lb.	3.1	.25	.78	32	.25
Total materials						12.24

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	2.40	2.40	3	.07
Combining	Acre	1.0	3.85	3.85	22	.85
Threshing	Bu.	48	.09	4.32	17	.73
Total contract work						1.65

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area III-C3, east central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, sp., h.	60-bu.	1.0	4.40	8.80	11	0.48	---
Apply manure, sp.	60-bu.	1.5	4.40	4.40	17	1.12	1.12
Plow, moldboard	2-14 inch	1.0	1.09	1.04	52	.57	.54
Plow, moldboard	3-14 inch	1.0	.99	.94	28	.28	.26
Plow, Graham	10-foot	1.0	.30	.28	3	.01	.01
Plow, one-way	10-foot	1.0	.32	.30	17	.05	.05
Harrow, springtooth	12-foot	1.0	.46	.42	10	.05	.04
Harrow, spiketooth	18-foot	2.1	.21	.19	76	.33	.30
Disk, tandem	10-foot	1.3	.53	.50	20	.14	.13
Level, wooden	14-foot	1.5	.46	.44	9	.06	.06
Level	12-foot	1.4	.50	.47	52	.36	.34
Drill	10-foot	1.0	.48	.44	100	.48	.44
Plow for ditches	1-14 inch	1.0	.20	.15	25	.05	.04
Ditch	4-foot	1.0	.20	.19	42	.08	.08
Irrigate	---	1.2	1.20	---	100	1.44	---
Spray	20-foot	1.0	.22	.19	10	.02	.02
Spray, contract	20-foot	1.0	.22	.19	3	.01	.01
Total preharvest						5.53	3.44
Combine	5-foot	1.0	1.15	1.06	29	.33	.31
Combine, self-propelled	14-foot	1.0	.38	.34	17	.06	---
Combine, s.p., contract	12-foot	1.0	.59	.54	22	.13	---
Haul, truck	1½-ton	1.0	.47	.39	68	.32	---
Bind	8-foot	1.0	1.18	.52	32	.38	.17
Shock	---	1.0	1.10	---	15	.17	---
Haul bundles, buckrake	---	1.0	.69	.63	32	.22	.20
Thresh	---	1.0	2.64	.60	15	.40	.09
Thresh, contract	---	1.0	2.64	.60	17	.45	.10
Haul grain, truck	1½-ton	1.0	.90	.82	32	.29	---
Total harvest						2.75	.87
Total 1/						8.28	4.31

1/ In addition, truck use averaged 0.53 hour an acre, self-propelled combine 0.18 hour an acre, and horse work 0.97 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA III-F1, 1952

The data presented here are based on a survey made in 1952 of approximately 10 farms that produced barley under irrigation in 1952 in west central California. These farms are located in type-of-farming area III-F1, which is comprised of a number of comparatively small valleys and flats in the west central portion of California.

In this particular area various crops compete for resources on irrigated lands. In 1952, the competitive position of barley was not strong and very little barley was grown. Farmers reported, however, that considerable barley had been grown in the area in former years. Most of the barley grown in the area in 1952 was produced in the central part of Kings County. Relatively large-scale operations prevail in the area.

The farms surveyed averaged a little over 1,700 acres of cropland per farm. In 1952, approximately 1,060 acres were in barley, and the yield averaged a little over 46 bushels an acre. Most of the farmers followed about the same practices in producing barley.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. Tractors with drawbar-horsepower ratings of about 40 were the most common.

Materials used and contract work hired, 1952 1/

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Cwt.	0.55	4.60	2.53	100	2.53
Nitrate fertilizer(33-0-0)	Cwt.	1.25	4.75	5.94	49	2.91
Water	Acre	1.0	1.60	1.60	100	1.60
Total materials						7.04

1/ No contract work was reported on farms surveyed in this area.

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area III-F1, west central California, 1952

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Harrow straw	45-foot	1.0	0.12	0.10	67	0.08	0.07
Disk, offset	28-foot	1.0	.14	.14	100	.14	.14
Plow, chisel	8-foot	1.0	.55	.52	54	.30	.28
Irrigate	---	1.0	.85	---	100	.85	---
Ditch and dike	---	1.0	.12	.11	50	.06	.06
Disk and harrow	20-foot	3.4	.20	.19	58	.39	.38
Level	20-foot	1.5	.21	.20	100	.32	.30
Disk, tandem	20-foot	2.5	.22	.21	54	.30	.28
Rodweed	24-foot	1.6	.17	.16	75	.20	.20
Seed, drill	30-foot	1.0	.30	.14	64	.19	.09
Seed, drill and harrow	30-foot	1.0	.30	.14	36	.11	.05
Total preharvest						2.94	1.85
Combine, self-propelled	12-foot	1.0	.51	.39	100	.51	---
Truck	1½-ton	1.0	.50	.49	100	.50	---
Total harvest						1.01	---
Total 1/						3.95	1.85

1/ In addition, truck use averaged 0.49 hour an acre and self-propelled combine 0.39 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D1, 1950

The data presented here are based on a survey made in 1950 of approximately 65 farms producing barley under irrigation in 1950 in southeastern Idaho and central Utah. These farms are located in type-of-farming area VI-D1, a general farming area in the irrigated valleys of southeastern Idaho and central Utah. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 165 acres per farm. Cropland comprised about 95 acres. In 1950, 15 acres were in barley, and the average yield was approximately 70 bushels per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 23; the most common was about 16.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.10	3.30	3.63	100	3.63
Manure	Ton	13	1/2.00	26.00	26	6.76
Mixed fertilizer	Cwt.	1.65	3.50	5.78	29	1.68
Binder twine	Lb.	4	.28	1.12	39	.44
Sacks	No.	6	.30	1.80	11	.20
Water	Acre	1.0	2.15	2.15	100	2.15
Total materials						14.86

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating	Cwt.	1.10	.22	.24	63	.15
Combining	Acre	1.0	5.50	5.50	7	.38
Binding	Acre	1.0	3.25	3.25	16	.52
Threshing	Bu.	70	.10	7.00	39	2.73
Hauling	Bu.	70	.05	3.50	10	.35
Total contract work						4.13

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area VI-D1, southeastern Idaho and central Utah, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor	Average time per acre - all farms: Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	4.95	4.02	21	1.04	0.84	---
Apply manure, horses-sp	60-bu.	1.0	7.11	8.58	5	.36	---	0.43
Plow, moldboard	2-16 inch	1.0	1.54	1.47	45	.69	.66	---
Plow, moldboard	2-14 inch	1.0	1.70	1.62	33	.56	.53	---
Plow, moldboard	1-16 inch	1.0	2.48	2.36	3	.07	.07	---
Plow, moldboard, horses	1-14 inch	1.0	6.40	18.10	5	.32	---	.90
Disk, tandem	7-foot	1.1	.68	.65	40	.30	.29	----
Harrow, spiketooth	10-foot	2.1	.56	.51	72	.85	.77	---
Harrow, spiketooth, h.	10-foot	3.1	1.20	3.30	15	.56	---	1.53
Level	8-foot	1.2	.60	.55	57	.41	.38	----
Level, horses	8-foot	1.2	1.30	3.44	11	.17	---	.45
Weed	6-foot	1.0	.85	.77	10	.08	.08	---
Corrugate	8-foot	1.0	.58	.52	18	.10	.09	---
Fertilize, spreader	10-foot	1.0	.82	.51	12	.10	.06	---
Seed, drill	8-foot	1.0	.66	.58	74	.49	.43	---
Seed, drill, horse	7-foot	1.0	1.19	2.09	26	.31	---	.54
Irrigate	---	2.6	1.80	---	100	4.68	---	---
Ditch	---	1.0	.84	.74	51	.43	.38	---
Ditch, horses	---	1.0	1.32	1.32	20	.26	---	.26
Ditch by hand	---	1.0	.87	---	34	.30	---	---
Total preharvest						12.08	4.58	4.11
Combine, self-propelled	12-foot	1.0	.80	.74	18	.14	---	---
Combine	6-foot	1.0	1.45	1.28	36	.52	.46	---
Combine, contract	6-foot	1.0	1.45	1.28	7	.10	.09	---
Bind	6-foot	1.0	1.60	1.45	16	.26	.23	---
Bind, horses	6-foot	1.0	1.88	3.96	7	.13	---	.28
Bind, contract	6-foot	1.0	1.60	1.45	16	.26	.23	---
Shock by hand	---	1.0	1.32	---	20	.26	---	---
Haul bundles	---	1.0	5.50	2.00	39	2.14	.78	---
Thresh, contract	---	1.0	2.40	1.10	39	.94	.43	---
Haul grain, truck	$1\frac{1}{2}$-ton	1.0	1.38	1.16	67	.92	---	---
Haul grain, horses	---	1.0	2.38	3.19	11	.26	---	.35
Haul, truck, contract	$1\frac{1}{2}$-ton	1.0	1.38	1.16	10	.14	---	---
Total harvest						6.07	2.22	.63
Total 1/						18.15	6.80	4.74

1/ In addition, self-propelled combine use averaged 0.13 hour an acre and truck use 0.90 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D3, 1950

The data presented here are based on a survey made in 1951 of 32 farms producing barley under irrigation in 1950. These farms are located in type-of-farming area VI-D3, a general farming area in the San Luis Valley in south central Colorado. The particular farms surveyed are quite diversified, producing livestock, hay, small grains, and potatoes.

The farms surveyed averaged about 486 acres per farm. Cropland comprised about 243 acres. In 1950, 44 acres were in barley, and the yield averaged approximately 42 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 9 to 33; the most common was about 20.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.9	1.10	2.09	51	1.07
Purchased seed	Bu.	1.9	1.80	3.42	49	1.68
Ceresan	Bu.	1.9	.11	.21	24	.05
Spray (2,4-D)	Pt.	1.1	.50	.55	13	.07
Water, ditch	Acre	1.0	.95	.95	100	.95
Water, pump	Acre	1.0	2.50	2.50	50	1.25
Twine, binder	Lb.	2.7	.27	.73	15	.11
Total materials						5.18

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Threshing	Bu.	42	.11	4.62	3	.14
Combining	Acre	1.0	5.75	5.75	27	1.55
Total contract work						1.69

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area VI-D3, south central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-16 inch	1.0	1.31	1.25	50	0.66	0.62
Plow, moldboard	3-14 inch	1.0	.99	.94	20	.20	.19
Plow, Graham	8-foot	1.2	.56	.54	25	.17	.16
Disk, tandem	8-foot	1.2	.63	.60	34	.26	.24
Irrigate	---	1.0	.94	---	55	.52	---
Harrow, springtooth	9-foot	1.0	.30	.27	17	.05	.05
Harrow, spiketooth	15-foot	1.4	.23	.21	26	.08	.08
Land, plane	9-foot	2.6	.46	.44	19	.23	.22
Level	9-foot	2.0	.51	.48	78	.80	.75
Drill	10-foot	1.0	.48	.44	100	.48	.44
Ditch	6-foot	1.1	.13	.12	67	.09	.09
Dike	2-disk	1.0	.13	.12	31	.04	.04
Irrigate	---	2.5	.76	---	100	1.90	---
Spray	20-foot	1.0	.25	.22	13	.32	.29
Total preharvest						5.80	3.17
Swath	10-foot	1.0	.69	.51	17	.12	.09
Combine	6-foot	1.0	1.08	.99	58	.63	.57
Combine, s.p., contract	12-foot	1.0	.62	.52	27	.17	---
Haul from combine, truck	1½-ton	1.0	.50	.44	85	.42	---
Bind	10-foot	1.0	.89	.53	15	.13	.08
Shock	---	1.0	1.22	---	15	.18	---
Haul bundles, horse	---	1.0	3.18	6.10	15	.48	---
Thresh	26-inch	1.0	1.15	.53	12	.14	.06
Thresh, contract	26-inch	1.0	1.15	.53	3	.03	.02
Haul grain, truck	1½-ton	1.0	.86	.67	15	.13	---
Total harvest						2.43	.82
Total 1/						8.23	3.99

1/ In addition, self-propelled combines averaged 0.14 hour an acre, truck use 0.47 hour an acre and horse work 0.92 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of 25 farms producing barley under irrigation. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in southeastern Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms surveyed averaged about 232 acres per farm. Cropland comprised about 188 acres. In 1950, 12 acres were in barley, and the yield averaged about 33 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 10 to 27; the most common was about 20.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.9	1.35	2.56	51	1.31
Purchased seed	Bu.	1.9	1.75	3.32	49	1.63
Ceresan	Bu.	1.9	.08	.15	30	.04
Manure	Ton	10	1/ 2.00	20.00	1	.20
Water	Acre	1.0	2.00	2.00	100	2.00
Twine, binder	Lb.	3.3	.27	.89	8	.07
Total materials						5.25

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying, plane	Acre	1.0	3.00	3.00	18	.54
Combining	Acre	1.0	4.65	4.65	17	.79
Binding	Acre	1.0	4.00	4.00	8	.32
Threshing	Bu.	33	.10	3.30	8	.26
Total contract work						1.91

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, ldr.-sp.	60-bu.	1.0	3.17	3.17	1	0.03	0.03
Fertilize, drill	8-foot	1.0	.59	.54	19	.11	.10
Plow, moldboard	1-16 inch	1.0	2.38	2.27	38	.90	.86
Plow, moldboard	2-14 inch	1.0	1.32	1.26	33	.44	.42
Disk, tandem	7-foot	1.8	.64	.61	31	.36	.34
Disk, tandem	8-foot	1.5	.52	.49	10	.08	.07
Disk, single	7-foot	1.6	.73	.69	20	.23	.22
Harrow, spiketooth	15-foot	2.2	.24	.22	76	.40	.36
Level	9-foot	2.2	.51	.48	43	.48	.46
Level, wooden	10-foot	2.2	.45	.43	15	.15	.14
Level	12-foot	2.6	.43	.41	32	.36	.34
Ditch	6-foot	1.0	.11	.10	45	.05	.04
Clean ditches	6-foot	2.0	.04	.03	9	.01	.01
Shovel ditches & ends	---	1.0	.29	---	4	.01	---
Irrigate	---	2.5	1.56	---	100	3.90	---
Corrugate	4-row	1.0	.56	.51	26	.15	.13
Drill	10-foot	1.0	.51	.46	100	.51	.46
Spray, airplane	---	1.0	---	---	18	---	---
Total preharvest						8.17	3.98
Combine	5-foot	1.0	1.26	1.16	25	.32	.29
Combine	6-foot	1.0	1.14	1.05	26	.30	.27
Combine, contract	6-foot	1.0	1.36	1.05	17	.23	.18
Combine	12-foot	1.0	.49	.45	24	.12	.11
Haul from combine, t.	---	1.0	.68	.62	68	.46	---
Bind, contract	8-foot	1.0	1.44	.79	8	.12	.06
Shock by hand	---	1.0	1.52	---	8	.12	---
Haul bundles	---	1.0	3.71	.66	8	.30	.05
Thresh, contract	32-inch	1.0	.83	.58	8	.07	.05
Haul grain, truck	---	1.0	.28	.25	8	.02	---
Total harvest						2.06	1.01
Total 1/						10.23	4.99

1/ In addition, truck use averaged 0.44 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, OREGON, 1950

The data presented here are based on a survey made in 1951 of approximately 30 farms producing barley, oats, and wheat under irrigation in central Oregon. These farms are located in type-of-farming area VI-D7, an area composed of irrigated valleys scattered throughout the western Mountain region. Livestock and specialized irrigated crops are the most important enterprises in these valleys.

The farms surveyed averaged about 128 acres per farm. Cropland comprised about 92 acres. In 1950, 18 acres were in irrigated barley, and the yield averaged approximately 44 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 7 to 27; the most common was about 17.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Bu.	2.5	1.55	3.88	100	3.88
Ceresan	Bu.	2.5	.11	.28	4	.01
Manure	Ton	3	1/2.00	6.00	9	.54
Mixed fertilizer	Cwt.	2.65	4.05	10.73	31	3.33
Nitrate fertilizer	Cwt.	2.10	3.80	7.98	10	.80
Phosphate fertilizer (0-18-0)	Cwt.	2.00	1.90	3.80	5	.19
Water	Acre	1.0	2.50	2.50	100	2.50
Sacks, replacement	No.	20	.26	5.20	16	.83
Twine, sack	Lb.	.2	.87	.17	34	.06
Twine, binder	Lb.	3.3	.28	.92	3	.03
Total materials						12.17

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	6.32	6.32	32	2.02
Threshing	Acre	1.0	4.50	4.50	3	.14
Total contract work						2.16

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area VI-D7 central Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	2.86	0.92	9	0.26	0.08
Fertilize, spreader	10-foot	1.0	.50	.44	16	.08	.07
Pick and haul rocks	---	1.0	.60	.60	3	.02	.02
Plow, moldboard	2-16 inch	1.0	1.61	1.53	61	.98	.93
Disk, tandem	8-foot	1.5	.59	.57	56	.49	.48
Disk, offset	4-foot	1.6	.99	.94	38	.60	.57
Harrow, spiketooth	8-foot	1.7	.55	.50	78	.73	.66
Harrow, springtooth	8-foot	2.3	.62	.57	9	.13	.12
Level, steel	10-foot	1.4	.53	.50	12	.09	.08
Level, steel	8-foot	1.5	.66	.63	16	.16	.15
Roll	8-foot	1.2	.62	.57	36	.27	.24
Drill	8-foot	1.0	.62	.57	33	.20	.19
Drill	10-foot	1.0	.51	.46	67	.34	.31
Border strip	---	1.0	.48	.44	11	.05	.05
Harrow, spiketooth	8-foot	1.0	.69	.63	5	.03	.03
Corrugate	8-foot	1.0	.59	.54	65	.38	.35
Irrigate	---	3.0	.52	---	100	1.56	---
Total preharvest						6.37	4.33
Combine, bulk	6-foot	1.0	1.95	1.50	54	1.05	.81
Combine, sacked	6-foot	1.0	2.85	1.43	11	.31	.16
Combine, bulk, contract	6-foot	1.0	1.95	1.50	9	.18	.14
Combine, sacked, contract	6-foot	1.0	2.85	1.43	23	.66	.33
Bind	8-foot	1.0	1.04	.91	3	.03	.03
Haul & thresh, contract	---	1.0	---	---	3	---	---
Haul grain	---	1.0	.75	.52	36	.27	.19
Haul grain, truck	1½-ton	1.0	.45	.41	47	.21	---
Total harvest 1/						2.71	1.66
Total 2/						9.08	5.99

1/ Excludes hauling and threshing done on a contract basis for which no time requirements were available.

2/ In addition, truck use averaged 0.19 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, 1952

The data presented here are based on a survey made in 1952 of approximately 40 farms that produced barley under irrigation in 1952 in central Wyoming. These farms are located in type-of-farming area VI-D7, which is comprised of comparatively small irrigated valleys in the Intermountain region. The particular type-of-farming area in which these farms lie is located along Muddy Creek and Wind and Big Horn Rivers in central Wyoming. Much of the farming area is under newly established reclamation projects and many of the farms have been in operation only a few years. General farming prevails in the area.

The farms surveyed averaged about 235 acres per farm. In 1952, approximately 175 acres were in crops, including 30 in irrigated barley. The average yield of barley was about 53 bushels an acre. Most of the farmers in this area grow small grains in their rotations partly as a supplement to their feeding operations and partly as a nurse crop for new seedings of alfalfa. Oats and barley are the most common small-grain crops grown in the area.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 26; the most common was about 20.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Cwt	1.00	4.30	4.30	100	4.30
Mixed fertilizer (10-20-0)	Cwt.	1.30	4.45	5.78	17	.98
Nitrate fertilizer(33-0-0)	Cwt.	1.00	5.00	5.00	15	.75
Water	Acre	1.0	1.90	1.90	100	1.90
Twine, binder	Lb.	3.5	.35	1.22	14	.17
Total materials						8.10

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Threshing	Bu.	53	.08	4.24	4	.17
Combining	Acre	1.0	5.75	5.75	17	.98
Trucking	Bu.	53	.08	4.24	4	.17
Total contract work						1.32

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area VI-D7, central Wyoming, 1952

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	1-18 inch	1.0	1.82	1.73	7	0.13	0.12
Plow, moldboard	2-14 inch	1.0	1.50	1.43	45	.68	.64
Plow, moldboard	2-16 inch	1.0	1.38	1.31	40	.55	.52
Disk, tandem	8-foot	1.6	.52	.49	49	.41	.38
Harrow	15-foot	2.1	.26	.24	95	.52	.48
Level	9-foot	1.8	.50	.47	96	.86	.82
Seed, drill	8-foot	1.0	.59	.54	54	.32	.29
Seed, drill	10-foot	1.0	.48	.44	46	.22	.20
Corrugate	5-22 inch	1.0	.45	.41	58	.26	.24
Ditch	---	1.2	.20	.19	85	.20	.20
Irrigate	---	2.8	4.50	---	100	12.60	---
Total preharvest						16.75	3.89
Windrow	7-foot	1.0	.66	.60	4	.03	.02
Bind	8-foot	1.0	1.38	.80	14	.19	.11
Shock	---	1.0	1.65	---	9	.15	---
Haul bundles	---	1.0	5.25	2.42	14	.74	.34
Thresh	---	1.0	1.68	.77	10	.17	.08
Thresh, contract	---	1.0	1.68	.77	4	.07	.03
Combine	5-foot	1.0	1.39	1.16	20	.28	.23
Combine	6-foot	1.0	1.35	1.04	34	.46	.35
Combine, contract	6-foot	1.0	1.12	1.04	17	.19	.18
Combine, self-propelled	12-foot	1.0	.62	.58	15	.09	---
Haul grain, truck	1½-ton	1.0	.82	.82	93	.76	---
Haul, truck, contract	1½-ton	1.0	.82	.75	4	.03	---
Total harvest						3.16	1.34
Total 1/						19.91	5.23

1/ In addition, truck use averaged 0.79 hour an acre and self-propelled combines 0.09 hour an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F1, 1950

The data presented here are based on a survey made in 1950 of approximately 50 farms producing barley under irrigation in 1950 in north central Wyoming and south central Montana. These farms are located in type-of-farming area IX-F1, a general farming and specialized cropping area in the irrigated valleys along the Big Horn, Shoshone, and Yellowstone Rivers in Montana and Wyoming. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 320 acres per farm. Cropland comprised about 150 acres. In 1950, approximately 24 acres were in barley, and the yield averaged about 48 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 13 to 26; the most common size was about 19.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.10	3.25	3.58	100	3.58
Mixed fertilizer	Cwt.	1.60	3.75	6.00	29	1.74
Binder twine	Lb.	3.8	.30	1.14	36	.41
Water	Acre	1.0	2.70	2.70	100	2.70
Total materials						8.43

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	1.10	.23	.25	59	.15
Combining	Acre	1.0	5.50	5.50	7	.38
Binding	Acre	1.0	3.25	3.25	16	.52
Threshing	Bu.	48	.09	4.32	36	1.56
Total contract work						2.61

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area IX-F1, north central Wyoming and south central Montana, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-16 inch	1.0	1.33	1.26	35	0.47	0.44
Plow, moldboard	2-14 inch	1.0	1.50	1.42	6	.09	.09
Plow, moldboard	1-16 inch	1.0	2.25	2.14	22	.50	.47
Disk, tandem	8-foot	1.2	.65	.62	52	.41	.38
Fertilize, spreader	10-foot	1.0	.85	.55	29	.25	.16
Harrow, spiketooth	15-foot	1.9	.44	.40	75	.63	.57
Level	10-foot	1.7	.47	.43	92	.74	.67
Weed	12-foot	1.0	.68	.62	2	.01	.01
Seed, drill	8-foot	1.0	.61	.54	100	.61	.54
Corrugate	6-row	1.0	.44	.40	61	.27	.24
Irrigate	---	3.3	2.36	---	100	7.79	---
Ditch	---	1.4	.55	.51	95	.73	.67
Ditch by hand	---	1.1	.37	---	27	.11	---
Total preharvest						12.61	4.24
Windrow	9-foot	1.0	.54	.49	16	.09	.08
Combine	6-foot	1.0	1.46	1.29	57	.83	.74
Combine, contract	6-foot	1.0	1.46	1.29	7	.10	.09
Bind	7-foot	1.0	1.76	1.55	20	.35	.31
Bind, contract	7-foot	1.0	1.76	1.55	16	.28	.25
Shock by hand	---	1.0	1.50	---	30	.45	---
Haul bundles	---	1.0	5.78	2.31	36	2.08	.83
Thresh, contract	---	1.0	2.40	1.10	36	.86	.40
Haul, truck	1½-ton	1.0	1.14	1.13	97	1.11	---
Total harvest						6.15	2.70
Total 1/						18.76	6.94

1/ In addition, truck use averaged 1.10 hours an acre.

BARLEY (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F2, 1951

The data presented here are based on a survey made in 1951 of approximately 50 farms producing barley under irrigation in 1951 in southeastern Wyoming and west central Nebraska. These farms are located in type-of-farming area IX-F2, a specialized crop and general farming area along the North Platte and Laramie Rivers. The particular farms surveyed are diversified, producing livestock, hay, corn, small grains, and specialized crops.

The farms averaged about 190 acres per farm. Cropland comprised about 131 acres. In 1951, approximately 21 acres were in barley, and the yield was about 40 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 13 to 27. There were two common sizes: 14 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.10	4.00	4.40	100	4.40
Seed-treating	Cwt.	1.10	.25	.28	86	.24
Manure	Ton	7	[1] 2.00	14.00	5	.70
Spray (2,4-D)	Pt.	1.0	.50	.50	9	.04
Water	Acre	1.0	1.90	1.90	100	1.90
Twine	Lb.	3.4	.35	1.19	26	.31
Total materials						7.28

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Binding	Acre	1.0	2.50	2.50	6	.15
Combining	Acre	1.0	5.00	5.00	34	1.70
Threshing	Bu.	40	.13	5.20	20	1.04
Hauling, truck	Bu.	40	.05	2.00	5	.10
Total contract work						2.99

[1] Estimated.

Man labor, power, and machinery used by operation in producing and harvesting barley, irrigated, area IX-F2, southeastern Wyoming and west central Nebraska, 1951

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	75-bu.	1.0	3.85	3.85	5	0.19	0.19
Plow, moldboard	2-14 inch	1.0	1.50	1.43	24	.36	.34
Plow, moldboard	2-16 inch	1.0	1.26	1.21	29	.37	.35
Plow, subsoil	8-foot	1.4	.67	.64	28	.26	.25
Disk, tandem	8-foot	1.5	.55	.50	52	.43	.39
Harrow, springtooth	9-foot	1.7	.55	.50	17	.16	.14
Harrow, spiketooth	15-foot	1.8	.31	.28	84	.47	.42
Level	10-foot	1.6	.47	.45	88	.66	.63
Seed, drill	10-foot	1.0	.52	.47	100	.52	.47
Harrow, spiketooth	15-foot	1.0	.28	.25	30	.08	.08
Ditch	---	1.0	.37	.24	93	.34	.22
Ditch, by hand	---	1.0	.47	---	15	.07	---
Irrigate	---	1.8	3.60	---	100	6.48	---
Spray	24-foot	1.0	.57	.43	9	.05	.04
Total preharvest						10.44	3.52
Windrow	7-foot	1.0	.60	.55	12	.07	.07
Bind	8-foot	1.0	1.00	.88	20	.20	.18
Bind, contract	8-foot	1.0	1.00	.88	6	.06	.05
Shock by hand	---	1.0	2.42	---	22	.53	---
Haul bundles	---	1.0	2.41	1.61	26	.89	.42
Thresh	22-inch	1.0	1.36	.52	6	.08	.03
Thresh, contract	22-inch	1.0	1.36	.52	20	.27	.10
Combine	6-foot	1.0	1.38	1.26	40	.55	.50
Combine, contract	6-foot	1.0	1.38	1.26	34	.47	.43
Haul grain, truck	1½-ton	1.0	1.07	1.16	80	.86	---
Haul grain, contract	1½-ton	1.0	1.07	1.16	5	.05	---
Total harvest						4.03	1.78
Total 1/						14.47	5.30

1/ In addition truck use averaged 0.99 hour an acre.

BARLEY: RESOURCES USED IN PRODUCTION, AREA I-A3, 1950

The data presented here are based on a survey made in 1950 of 23 farms producing barley in north central California. These farms are located in the grain and rice producing portions of type-of-farming area I-A3, a fruit and mixed-farming area in the Sacramento Valley.

The farms surveyed averaged about 621 acres. Cropland comprised about 440 acres. In 1950, 115 acres were in barley, and the yield averaged approximately 37 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 14 to 62; the most common was about 31.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.8	1.35	2.43	72	1.75
Purchased seed	Bu.	1.8	1.60	2.88	28	.81
Cleaning seed	Bu.	1.8	.10	.18	29	.05
Nitrate fertilizer (21-0-0)	Cwt.	2.0	2.80	5.60	7	.39
Spray (2,4-D)	Pt.	1.3	.67	.87	21	.18
Sacks, replacement	No.	16	.23	3.68	73	2.69
Sack strings	No.	16	.01	.16	82	.13
Total materials						6.00

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	1.00	1.00	14	.14
Combining	Acre	1.0	4.15	4.15	17	.71
Hauling	Bu.	37	.06	2.22	10	.22
Total contract work						1.07

Man labor, power, and machinery used by operation in producing and harvesting barley, area I-A3, north central California, 1950

Operation	Size or equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	5-14 inch	1.0	0.68	0.65	89	0.61	0.58
Subsoil	1-prong	1.0	1.25	1.20	5	.06	.06
Chisel	6-foot	2.0	.74	.70	2	.03	.03
Disk, tandem	10-foot	1.9	.42	.40	62	.50	.47
Harrow, spiketooth	20-foot	1.5	.21	.19	64	.20	.18
Float, steel	16-foot	1.0	.36	.35	9	.03	.03
Fertilize, drill	14-foot	1.0	.57	.52	7	.04	.04
Seed, drill	10-foot	1.0	.38	.31	49	.19	.15
Seed, endgate	---	1.0	.28	.13	46	.13	.06
Seed, plane, contract	---	1.0	---	---	5	---	---
Harrow	20-foot	1.6	.20	.18	36	.12	.10
Spray	20-foot	1.0	.22	.09	7	.02	.01
Spray, plane, contract	---	1.0	---	---	14	---	---
Total preharvest						1.93	1.71
Combine, bulk	16-foot	1.0	.77	.36	18	.14	.06
Combine, sacked	16-foot	1.0	1.50	.46	46	.69	.21
Combine, sacked, contract	16-foot	1.0	1.50	.46	17	.26	.08
Combine, s.p., sacked	14-foot	1.0	1.25	.57	19	.24	---
Haul, truck, bulk	1½-ton	1.0	.32	.29	18	.06	---
Haul, truck, sacked	1½-ton	1.0	.51	.23	56	.29	---
Haul, truck, contract	1½-ton	1.0	.51	.23	10	.05	---
Total harvest						1.73	.35
Total 1/						3.66	2.06

1/ In addition, truck use averaged 0.20 hour an acre and self-propelled combines 0.11 hour an acre.

BARLEY: RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of approximately 25 farms producing nonirrigated barley in southeastern Colorado and northeastern New Mexico. These farms are located in type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged a little over 1,900 acres per farm. Cropland comprised about 756 acres. In 1950, 94 acres were planted to nonirrigated barley. Because of a severe drought in 1950, only about 50 percent of the acreage was harvested. The yield of 9 bushels per harvested acre also was considerably below the usual yield of approximately 25 bushels per acre.

Tractors and motorized equipment provided most of the power used on these farms, although horses were used for hauling bundles on farms where barley was threshed. The drawbar-horsepower rating of tractors ranged from 10 to 36; the most common was about 23.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 1/	Bu.	0.9	1.65	1.48	100	1.48
Ceresan	Bu.	.9	.12	.11	10	.01
Phosphate fertilizer	Cwt.	2.50	3.40	8.50	1	.08
Spray (2,4-D)	Pt.	1.0	.70	.70	9	.06
Twine, binder	Lb.	2.5	.30	.75	3	.02
Total materials						1.65

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Threshing	Bu.	9	.10	.90	3	.03
Total contract work						.03

1/ Approximately 75 percent of the farmers in this area purchased barley seed.

Man labor, power, and machinery used by operation in producing and harvesting barley, area II-B2, southeastern Colorado and northeastern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	1-16 inch	1.0	2.42	2.31	6	0.15	0.14
Plow, moldboard	2-14 inch	1.0	1.33	1.27	5	.07	.06
Plow, one-way	8-foot	1.6	.45	.43	34	.24	.23
Plow, one-way	15-foot	2.7	.18	.17	19	.09	.09
Plow, Graham	9-foot	1.3	.40	.38	15	.08	.07
Field cultivate	10-foot	1.0	.34	.32	5	.02	.02
Harrow, spiketooth	15-foot	2.0	.26	.24	10	.05	.05
Drill	8-foot	1.0	.54	.49	14	.08	.07
Drill	14-foot	1.0	.30	.27	86	.26	.23
Spray	24-foot	1.0	.19	.17	9	.02	.02
Total preharvest						1.06	.98
Combine	6-foot	1.0	.86	.72	1/52	.45	.37
Combine	12-foot	1.0	.42	.39	1/45	.19	.18
Haul grain, truck	1½-ton	1.0	.09	.08	1/97	.09	---
Bind	8-foot	1.0	.81	.72	1/ 3	.02	.02
Shock by hand	---	1.0	.66	---	1/ 3	.02	---
Haul bundles, horse	---	1.0	3.61	2.43	1/ 3	.11	---
Thresh, contract	26-inch	1.0	.53	.29	1/ 3	.02	.01
Haul grain, truck	1½-ton	1.0	.53	.24	1/ 3	.02	---
Total harvest 1/						.92	.58
Total 2/						1.98	1.56

1/ Harvested acreage only. Due to a severe drought, only 50 percent of the planted acreage was harvested.

2/ In addition, truck use averaged 0.09 hour an acre, and horse work 0.07 hour an acre.

BARLEY: RESOURCES USED IN PRODUCTION, AREA III-B1, 1948

The data presented here are based on a survey made in 1949 of approximately 16 farms producing barley. These farms are located in type-of-farming area III-B1, the wheat-pea area of the Palouse Region of southeastern Washington and northern Idaho. Barley is a minor crop in the Palouse area. It is usually grown after winter wheat and before peas. Spring wheat and oats occupy the same place in the crop rotation as barley, and the cropping practices for these crops are about the same.

The farms surveyed averaged about 474 acres per farm. In 1948, cropland comprised about 311 acres, of which 28 acres were in barley, 17 acres in spring wheat, and 6 acres in oats. The yield of barley averaged about 34 bushels per acre, spring wheat about 22 bushels, and oats 40 bushels.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 18 to 45; the most common was about 27.

Materials used and contract work hired, 1948

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	1.4	1.75	2.45	100	2.45
Sodium chlorate	Cwt.	1.1	12.40	13.64	2	.27
Spray (2,4-D)	Gal.	.13	9.25	1.20	20	.24
Total materials						2.96

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating & cleaning	Bu.	1.4	.25	.35	75	.26
Combining	Acre	1.0	8.00	6.00	23	1.38
Hauling	Bu.	34.6	.06	2.08	23	.48
Total contract work						2.12

Man labor, power, and machinery used by operation in producing and harvesting barley, area III-Bl, southeastern Washington and northern Idaho, 1948

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Disk, offset	10-foot	1.3	0.29	0.28	45	0.16	0.16
Plow, moldboard	4-16 inch	1.0	.71	.69	60	.43	.42
Plow, disk	13-foot	1.0	.24	.24	40	.09	.09
Cultivate, duckfoot	10-foot	2.0	.40	.40	6	.04	.04
Harrow, spiketooth	34-foot	1.8	.12	.12	93	.20	.20
Weed, rod weeder	17-foot	1.0	.14	.14	40	.06	.06
Rod weed and harrow	24-foot	1.0	.18	.17	21	.04	.04
Harrow, springtooth	24-foot	1.7	.14	.13	54	.13	.12
Seed, drill	20-foot	1.0	.25	.19	100	.25	.20
Roll	32-foot	1.0	.12	.12	5	.01	.01
Spray	24-foot	1.0	.70	.45	20	.14	.09
Total preharvest						1.55	1.43
Combine	12-foot	1.0	1.23	.47	77	.95	.36
Combine, contract	12-foot	1.0	1.23	.47	23	.28	.11
Haul, truck	1½-ton	1.0	.63	.63	77	.49	---
Haul, contract, t.	1½-ton	1.0	.63	.63	23	.14	---
Total harvest						1.86	.47
Total 1/						3.41	1.90

1/ In addition, truck use averaged 0.63 hour an acre.

BARLEY: RESOURCES USED IN PRODUCTION, AREA III-C2, 1950

The data presented here are based on a survey made in 1951 of 24 farms producing barley. These farms are located in type-of-farming area III-C2, a wheat and range-livestock area in northeastern Montana and southwestern North Dakota.

The farms surveyed averaged 1,309 acres per farm. Cropland comprised about 588 acres. In 1950, 60 acres were in barley, and the yield averaged 22 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 13 to 41; the most common was about 27.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.4	0.95	1.33	93	1.24
Purchased seed	Bu.	1.4	1.15	1.61	7	.11
Twine	Lb.	3.6	.28	1.01	9	.09
Total materials						1.44

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Threshing	Bu.	22	.14	3.08	4	.12
Total contract work						.12

Man labor, power, and machinery used by operation in producing and harvesting barley, area III-C2, northeastern Montana and southwestern North Dakota, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	90-bu.	1.0	5.50	2.50	1	0.06	0.03
Plow, moldboard	3-14 inch	1.0	.73	.69	20	.15	.14
Plow, one-way	8-foot	1.5	.28	.26	22	.09	.09
Plow and pack	3-14 inch	1.0	.85	.81	9	.08	.07
Harrow, spiketooth	20-foot	1.3	.12	.12	34	.53	.53
Disk, tandem	10-foot	1.0	.25	.24	13	.03	.03
Plow, pack, and pony drill	4-foot	1.0	.53	.48	31	.16	.15
Disk and drill	12-foot	1.0	.40	.37	21	.08	.08
Drill	10-foot	1.0	.30	.27	48	.14	.13
Harrow, spiketooth	20-foot	1.2	.12	.12	29	.42	.42
Total preharvest						1.74	1.67
Windrow	12-foot	1.0	.24	.23	25	.06	.06
Combine	12-foot	1.0	.37	.29	91	.34	.26
Haul grain, truck	---	1.0	.28	.14	91	.25	---
Bind	8-foot	1.0	.75	.40	9	.07	.04
Shock by hand	---	1.0	.94	---	9	.08	---
Haul bundles	---	1.0	1.45	.50	3	.04	.02
Haul bundles, horses	---	1.0	1.21	1.76	6	.07	---
Thresh	26-inch	1.0	.65	.27	5	.03	.01
Thresh, contract	26-inch	1.0	.66	.20	4	.03	.01
Haul grain, truck	---	1.0	1.30	.59	9	.12	---
Total harvest						1.09	.40
Total 1/						2.84	2.07

1/ In addition, horse work averaged 0.11 hour an acre and truck use 0.18 hour an acre.

BARLEY: RESOURCES USED IN PRODUCTION, AREA III-C3, 1950

The data presented here are based on a survey made in 1951 of nine farms producing barley and winter wheat on a continuous cropping basis in east central Colorado. These farms are located in the Colorado portion of type-of-farming area III-C3, a wheat and range-livestock area in the Central High Plains.

The farms surveyed averaged about 848 acres per farm. Cropland comprised about 447 acres. In 1950, 51 acres were in barley, and the yield averaged slightly over 12 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 12 to 28; the most common was about 20.

Materials used and contract work hired, 1950 1/

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.0	1.00	1.00	92	0.92
Purchased seed	Bu.	1.0	1.70	1.70	8	.14
Ceresan	Bu.	1.0	.03	.03	39	.01
Total materials						1.07

1/ No contract work was reported on farms surveyed in this area.

Man labor, power, and machinery used by operation in producing and harvesting barley, area III-C3, east central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.98	0.93	27	0.26	0.25
Plow, one-way	12-foot	1.0	.32	.30	62	.20	.19
Plow, Graham	10-foot	2.0	.30	.28	65	.39	.36
Disk, tandem	10-foot	1.3	.32	.30	41	.17	.16
Weed, rod weeder	12-foot	1.0	.25	.23	25	.06	.06
Harrow, spiketooth	20-foot	1.0	.20	.18	34	.07	.06
Drill	12-foot	1.0	.30	.27	100	.30	.27
Total preharvest						1.45	1.35
Combine	6-foot	1.0	1.02	.79	19	.19	.15
Combine	12-foot	1.0	.70	.46	81	.57	.37
Haul, truck	1½-ton	1.0	.30	.28	100	.30	---
Total harvest						1.06	.52
Total 1/						2.51	1.87

1/ In addition, truck use averaged 0.28 hour per acre.

BARLEY: RESOURCES USED IN PRODUCTION, AREA IV-E1, 1950

The data presented here are based on a survey made in 1950 of 37 farms producing barley in the Willamette Valley of western Oregon. These farms are located in type-of-farming area IV-E1, a dairy and mixed-farming area ranging from the Puget Sound area south through the Willamette Valley.

The farms surveyed averaged about 311 acres per farm. Cropland comprised about 241 acres. In 1950, 45 acres were in barley, and the yield averaged approximately 35 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 14 to 28; the most common was about 22.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 1/	Bu.	2.3	1.55	3.56	100	3.56
Clean and treat seed	Bu.	2.3	.14	.32	70	.22
Mixed fertilizer (16-20-0)	Cwt.	1.3	4.10	5.33	9	.48
Nitrate fertilizer (21-0-0)	Cwt.	1.25	3.20	4.00	17	.68
Nitrate fertilizer (33-0-0)	Cwt.	.80	4.15	3.32	17	.56
Spray (2,4-D)	Pt.	1.6	.60	.96	36	.35
Sacks, replacement	No.	14	.23	3.22	14	.45
Sack strings	No.	14	.01	.14	33	.05
Total materials						6.35

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	1.50	1.50	12	.18
Combining	Acre	1.0	4.10	4.10	7	.29
Hauling	Cwt.	16.8	.08	1.34	14	.19
Total contract work						.66

1/ Approximately 5 percent of the farmers in this area purchased barley seed.

Man labor, power, and machinery used by operation in producing
and harvesting barley, area IV-El,
western Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-14 inch	1.0	1.14	1.09	30	0.34	0.33
Plow, moldboard	3-14 inch	1.0	.92	.88	62	.57	.55
Disk, tandem	7-foot	1.8	.50	.47	54	.49	.46
Disk, tandem	10-foot	2.7	.33	.32	18	.16	.15
Rototill	6-foot	2.3	.77	.70	8	.14	.13
Fertilize, spreader	10-foot	1.0	.32	.28	33	.11	.09
Harrow, springtooth	10-foot	1.8	.45	.41	53	.43	.39
Harrow, spiketooth	15-foot	2.0	.26	.24	41	.21	.20
Harrow, go-devil	10-foot	1.2	.39	.36	39	.18	.17
Roll	10-foot	1.1	.40	.37	16	.07	.07
Seed, drill	8-foot	1.0	.49	.45	26	.13	.12
Seed, drill	10-foot	1.0	.36	.33	74	.27	.24
Roll	10-foot	1.0	.40	.37	12	.05	.04
Spray	20-foot	1.0	.22	.19	24	.05	.05
Spray, contract	20-foot	1.0	.22	.19	12	.03	.02
Total preharvest						3.23	3.01
Combine, sacked	6-foot	1.0	2.12	.98	22	.47	.22
Combine, bulk	6-foot	1.0	1.07	.99	13	.14	.13
Combine, sacked	12-foot	1.0	1.22	.56	8	.10	.04
Combine, sacked, contract	12-foot	1.0	1.22	.56	3	.04	.02
Combine, s.p., bulk	12-foot	1.0	.60	.55	50	.30	---
Combine, s.p., bulk, c.	12-foot	1.0	.60	.55	4	.02	---
Haul, bulk, truck	---	1.0	.33	.30	66	.22	---
Haul, sacked, truck	---	1.0	.85	.42	20	.17	---
Haul, truck, contract	---	1.0	.64	.38	14	.09	---
Total harvest						1.55	.41
Total 1/						4.78	3.42

1/ In addition, truck use averaged 0.33 hour an acre and self-propelled combines 0.30 hour an acre.

Note: c. = operation performed on contract basis.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A1, 1949

The data presented here are based on a survey made in 1950 of 14 farms producing irrigated dry beans. These farms are located in type-of-farming area I-A1, a fruit and mixed-farming area in the Yakima River Valley of central Washington.

The farms surveyed averaged about 102 acres per farm. Cropland comprised about 86 acres. In 1949, 22 acres were in irrigated dry beans, and the yield averaged approximately 1,950 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 10 to 26; the most common was about 19.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	77	0.10	7.70	100	7.70
Mixed fertilizer (16-20-0)	Cwt.	4.10	3.75	15.38	38	5.84
Nitrate fertilizer (33-0-0)	Cwt.	1.80	3.90	7.02	36	2.53
Phosphate fertilizer (0-43-0)	Cwt.	1.50	3.30	4.95	7	.35
Water	Acre	1.0	5.10	5.10	100	5.10
Sack rental	No.	20	.05	1.00	7	.07
Sack strings	No.	20	.01	.20	7	.01
Total materials						21.60

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Cutting	Acre	1.0	2.80	2.80	22	.62
Combining	Acre	1.0	11.25	11.25	66	7.42
Hauling	Cwt.	19.5	.12	2.34	32	.75
Total contract work						8.79

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area I-A1, central Washington, 1949

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	1-16 inch	1.0	2.25	2.15	56	1.26	1.20
Plow, moldboard	2-16 inch	1.0	1.21	1.15	41	.50	.47
Disk, tandem	7-foot	1.8	.68	.65	95	1.16	1.11
Fertilize, spreader	10-foot	1.0	.59	.51	78	.46	.40
Harrow, spiketooth	15-foot	4.2	.30	.27	100	1.26	1.13
Ditch	4-row	1.0	.64	.58	76	.49	.44
Irrigate	---	1.0	.70	---	76	.53	---
Level, steel	6-foot	1.4	.55	.52	33	.25	.24
Level, wooden	8-foot	1.4	.63	.60	41	.36	.34
Plant	4-row	1.0	1.43	.93	74	1.06	.69
Plant	6-row	1.0	.80	.74	26	.21	.19
Cultipack	8-foot	1.0	.52	.49	26	.14	.13
Corrugate	6-row	1.0	.64	.58	44	.28	.26
Irrigate	---	5.9	.67	---	100	3.95	---
Cultivate	4-row	3.1	1.14	1.04	74	2.61	2.38
Cultivate	6-row	2.0	.57	.52	26	.30	.27
Weed	8-foot	1.5	.46	.42	10	.07	.06
Weed by hand	---	1.0	7.18	---	27	1.94	---
Total preharvest						16.83	9.31
Cut	2-row	1.0	1.48	1.35	12	.18	.16
Cut	4-row	1.0	1.01	.92	66	.67	.61
Cut, contract	4-row	1.0	1.01	.92	22	.22	.20
Windrow	10-foot	1.0	.74	.68	74	.55	.50
Combine	5-foot	1.0	3.30	1.52	34	1.12	.52
Combine, contract	5-foot	1.0	3.30	1.52	66	2.18	1.00
Haul, truck	1½-ton	1.0	.89	.58	68	.61	---
Haul, truck, contract	1½-ton	1.0	.89	.58	32	.28	---
Total harvest						5.81	2.99
Total 1/						22.64	12.30

1/ In addition, truck use averaged 0.58 hour an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A3, 1949

The data presented here are based on a survey made in 1950 of 19 farms producing dry beans under irrigation in north central California. These farms are located primarily in the rice- and grain-producing portions of type-of-farming area I-A3, a fruit and mixed-farming area in the Sacramento Valley.

The farms surveyed averaged about 519 acres. Cropland comprised about 479 acres. In 1949, 181 acres were in irrigated dry beans, and the yield averaged about 1,936 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 11 to 62; the most common was about 31.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 1/	Lb.	47	0.10	4.70	100	4.70
Clean and treat seed	Lb.	47	.01	.47	48	.23
Mixed fertilizer	Cwt.	2.30	2.90	6.67	4	.27
Dust (DDT)	Lb.	27	.07	1.89	47	.89
Water 2/	Acre	1.0	4.70	4.70	78	3.67
Sacks	No.	20.0	.27	5.40	100	5.40
Sack twine	Lb.	.2	1.00	.20	100	.20
Total materials						15.36

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Dusting	Acre	1.0	1.10	1.10	34	.37
Cutting	Acre	1.0	2.00	2.00	3	.06
Raking	Acre	1.0	1.00	1.00	6	.06
Harvesting	Cwt.	19.4	.70	13.58	17	2.31
Hauling	Cwt.	19.4	.12	2.33	87	2.03
Total contract work						4.83

1/ Approximately 35 percent of the farmers in this area purchased bean seed.

2/ 22 percent of acreage was subirrigated with no cost for water.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area I-A3, north central California, 1949

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, disk	6-disk	1.0	0.91	0.87	2	0.02	0.02
Subsoil	3-prong	1.2	.63	.58	55	.42	.38
Chisel	9-foot	1.0	.55	.50	40	.22	.20
Disk, tandem	10-foot	3.0	.42	.40	98	1.23	1.18
Ridge	5-foot	1.0	.36	.33	16	.06	.05
Irrigate	---	1.0	1.27	---	16	.20	---
Harrow, springtooth	12-foot	2.0	.40	.37	42	.34	.31
Harrow, spiketooth	20-foot	2.9	.21	.19	68	.41	.37
Weeder, chisel	10-foot	1.3	.40	.37	37	.19	.18
Roll	20-foot	1.2	.24	.22	43	.12	.11
Level, steel	10-foot	1.8	.43	.41	49	.38	.36
Plant	4-row	1.0	.58	.37	41	.24	.15
Plant	8-row	1.0	.60	.22	59	.35	.13
Roll	10-foot	1.0	.38	.35	10	.04	.04
Rotary hoe	6-row	1.0	.25	.23	18	.04	.04
Ridge	5-foot	1.0	.36	.33	12	.04	.04
Furrow	4-row	1.3	.82	.75	8	.09	.08
Irrigate	---	3.6	1.27	---	28	1.28	---
Cultivate	4-row	2.7	.52	.47	83	1.16	1.05
Cultivate	8-row	2.0	.26	.24	17	.09	.08
Plow subditches	---	1.0	.12	.06	35	.04	.02
Hoe	---	1.5	2.93	---	80	3.52	---
Dust	8-row	1.0	.13	.12	13	.02	.02
Dust, plane, contract	---	1.0	---	---	34	---	---
Total preharvest						10.50	4.81
Cut	4-row	1.0	.35	.32	100	.35	.32
Rake, side-delivery	10-foot	1.0	.41	.37	94	.39	.35
Rake, s.d., contract	10-foot	1.0	.41	.37	6	.02	.02
Trim row ends, hand	---	1.0	.68	---	51	.35	---
Combine	6-row	1.0	1.97	.36	54	1.06	.19
Combine, contract	6-row	1.0	1.97	.36	17	.33	.06
Combine	6-foot	1.0	2.15	.79	19	.41	.15
Combine, s.p.	14-foot	1.0	.47	.22	10	.05	---
Haul, truck	1½-ton	1.0	.44	.34	13	.06	---
Haul, truck, contract	1½-ton	1.0	.44	.34	87	.38	---
Total harvest						3.40	1.09
Total 1/						13.90	5.90

1/ In addition, truck use averaged 0.34 hour an acre and self-propelled combines 0.02 hour an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A5, 1950

The data presented here are based on a survey made in 1951 of approximately 50 farms producing dry field beans under irrigation in 1950 in west central Colorado. These farms are located in type-of-farming area I-A5, a fruit and mixed farming area in the western slope of Colorado.

The farms surveyed averaged about 106 acres per farm. In 1950, 91 acres were in crops, including 48 in dry beans. The average yield of beans was about 1,640 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 13 to 23; the most common was 14.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.45	10.25	4.61	100	4.61
Manure	Tons	9	1/ 2.00	18.00	5	.90
Nitrate fertilizer (33-0-0)	Cwt.	1.50	4.35	6.52	35	2.28
Dust	Lb.	4.0	.38	1.52	95	1.44
Water	Acre	1.0	4.00	4.00	100	4.00
Total materials						13.23

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Dusting	Acre	2/1.2	1.60	1.92	60	1.15
Threshing	Cwt.	16.4	.35	5.74	25	1.44
Combining	Cwt.	16.4	.50	8.20	30	2.46
Hauling, truck	Cwt.	16.4	.10	1.64	30	.49
Total contract work						5.54

1/ Estimated.

2/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area I-A5, west central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	5.37	5.37	5	0.27	0.27
Plow, moldboard	2-14 inch	1.0	1.38	1.31	48	.66	.63
Plow, moldboard	1-16 inch	1.0	2.48	2.36	52	1.29	1.23
Disk, tandem	8-foot	1.4	.58	.52	75	.61	.55
Harrow, spiketooth	10-foot	2.0	.47	.43	98	.92	.84
Level	8-foot	1.3	.56	.54	85	.62	.59
Corrugate	3-row	1.0	.69	.63	100	.69	.63
Irrigate	---	1.0	5.12	---	100	5.12	---
Ditch	---	1.0	.78	.40	67	.52	.27
Ditch by hand	---	1.0	.70	---	43	.30	---
Cultivate	6-foot	1.0	.71	.65	65	.46	.42
Plant	2-row	1.0	.96	.89	100	.96	.88
Harrow, spiketooth	10-foot	1.0	.43	.39	65	.28	.25
Weed by hand	---	1.0	2.62	---	25	.66	---
Dust	6-row	1.2	.73	.64	35	.31	.27
Dust, contract	6-row	1.2	.73	.64	60	.53	.46
Cultivate, first	2-row	1.0	1.06	.97	100	1.06	.97
Cultivate, other	2-row	1.7	.90	.82	100	1.53	1.39
Irrigate	---	4.4	4.85	---	100	21.34	---
Total preharvest						38.13	9.65
Cut	2-row	1.0	.96	.88	100	.96	.88
Rake	---	1.0	.66	.60	100	.66	.60
Shock by hand	---	1.0	4.66	---	70	3.26	---
Combine	---	1.0	1.51	1.24	43	.65	.51
Combine, contract	---	1.0	1.51	1.24	30	.45	.37
Haul to thresher	---	1.0	3.24	1.36	27	.87	.37
Thresh	---	1.0	3.22	.66	2	.06	.01
Thresh, contract	---	1.0	3.22	.66	25	.80	.16
Haul, truck	1½-ton	1.0	.92	.64	70	.64	---
Haul, truck, contract	1½-ton	1.0	.92	.64	30	.28	---
Total harvest						8.63	2.90
Total 1/						46.76	12.55

1/ In addition truck use averaged 0.64 hour an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA III-B1, 1949

The data presented here are based on a survey made in 1950 of 28 farms producing dry beans under irrigation in the Spokane River Valley in eastern Washington. These farms are located on the northern edge of type-of-farming area III-B1, a wheat-pea area in the eastern portion of the Columbia River Basin.

The farms surveyed averaged about 137 acres per farm. Cropland comprised about 98 acres. In 1949, 64 acres were in irrigated dry beans, and the yield averaged approximately 1,404 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 10 to 26; the most common was about 15.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Lb.	65	0.10	6.50	100	6.50
Manure	Ton	6	1/ 2.00	12.00	7	.84
Mixed fertilizer	Cwt.	2.10	3.60	7.56	10	.76
Gypsum	Cwt.	2.00	1.40	2.80	4	.11
Water	Acre	1.0	11.30	11.30	100	11.30
Sacks	No.	12	.24	2.88	55	1.58
Sack rental	No.	12	.05	.60	21	.13
Sack strings	No.	12	.01	.12	100	.12
Total materials						21.34

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Cutting	Acre	1.0	2.05	2.05	4	.08
Raking	Acre	1.0	2.25	2.25	2	.04
Combining	Cwt.	14.0	.80	11.20	10	1.12
Hauling	Cwt.	14.0	.10	1.40	11	.15
Total contract work						1.39

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area III-B1, eastern Washington, 1949

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	3.38	1.53	2	0.07	0.03
Apply manure, loader-sp.	---	1.0	3.27	3.27	5	.16	.16
Plow, moldboard	1-16 inch	1.0	2.28	2.17	15	.34	.33
Plow, moldboard	2-14 inch	1.0	1.34	1.28	48	.64	.61
Plow, moldboard	4-14 inch	1.0	.59	.57	37	.22	.21
Disk, tandem	7-foot	1.5	.53	.51	60	.48	.46
Fertilize, distributor	10-foot	1.0	.57	.52	12	.07	.06
Harrow, spiketooth	15-foot	1.8	.31	.28	52	.29	.26
Harrow, springtooth	8-foot	1.9	.75	.68	84	1.19	1.08
Weed, rod weeder	10-foot	1.0	.31	.28	19	.06	.05
Level	8-foot	1.2	.56	.54	93	.62	.60
Pick rocks	---	1.0	4.94	3.15	19	.94	.60
Plant	4-row	1.0	1.08	.55	96	1.04	.53
Plant	2-row	1.0	1.84	.99	4	.07	.04
Harrow, spiketooth	20-foot	1.0	.23	.21	13	.03	.03
Cultivate	4-row	3.7	.69	.63	85	2.17	1.98
Cultivate	2-row	4.0	1.10	1.01	15	.66	.61
Ditch	V-ditcher	1.0	.30	.25	25	.08	.06
Shovel row ends, hand	---	1.0	1.18	---	4	.05	---
Irrigate, gravity	---	5.7	1.63	---	57	5.30	---
Haul irrigation pipe	---	6.8	.14	.09	23	.22	.14
Irrigate, sprinkler	---	5.8	.76	---	43	1.90	---
Weed by hand	---	1.1	4.64	---	56	2.86	---
Plow ditches	V-ditcher	1.0	.24	.22	18	.04	.04
Total preharvest						19.50	7.88
Cut	2-row	1.0	.90	.82	52	.47	.43
Cut	4-row	1.0	.41	.37	44	.18	.16
Cut, contract	4-row	1.0	.41	.37	4	.02	.01
Rake, side-delivery	8-foot	1.4	.60	.55	98	.82	.75
Rake, s.d., contract	8-foot	1.0	.60	.55	2	.01	.01
Combine	5-foot	1.0	2.72	1.20	90	2.45	1.08
Combine, contract	5-foot	1.0	2.72	1.20	10	.27	.12
Haul to farm, truck	1½-ton	1.0	.75	.27	47	.35	---
Haul to warehouse, truck	1½-ton	1.0	.68	.33	39	.27	---
Haul, truck, contract	1½-ton	1.0	.68	.33	11	.07	---
Total harvest						4.91	2.56
Total 1/						24.41	10.44

1/ In addition, truck use averaged 0.30 hour an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION
AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of 26 farms producing dry beans under irrigation. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in southeastern Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms surveyed averaged about 342 acres per farm. Cropland comprised about 163 acres. In 1950, 20 acres were in dry beans, and the yield averaged about 24 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 10 to 41; the most common was 21.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Bu.	0.9	7.20	6.48	100	6.48
Manure	Ton	5	1/2.00	10.00	3	.30
Nitrate fertilizer	Cwt.	1.00	4.10	4.10	9	.37
Dust	Lb.	34	.08	2.72	38	1.03
Water, ditch	Acre	1.0	2.35	2.35	100	2.35
Water, pump	Acre	1.0	2.25	2.25	6	.13
Total materials						10.66

CONTRACT WORK HIRED

Hoeing	Acre	2/1.4	4.80	6.72	68	4.57
Dusting 3/	Acre	2/1.4	1.50	2.10	38	.80
Threshing	Bu.	24	.23	5.34	37	1.98
Total contract work						7.35

1/ Estimated.
2/ One acre times average number of times over.
3/ Airplane charge only.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, ldr.-sp.	60-bu.	1.0	1.76	1.76	3	0.05	0.05
Plow, moldboard	2-14 inch	1.0	1.35	1.29	95	1.28	1.23
Disk, tandem	8-foot	1.9	.53	.50	78	.78	.74
Harrow, spiketooth	15-foot	2.2	.24	.22	75	.40	.36
Roll	10-foot	1.8	.41	.38	70	.52	.48
Level	9-foot	2.4	.49	.47	39	.46	.44
Level	12-foot	2.1	.43	.41	55	.50	.47
Level and roll	10-foot	2.2	.51	.46	24	.27	.24
Irrigate	---	1.0	1.33	---	54	.72	---
Plant	4-row	1.0	.72	.66	81	.58	.53
Plant	2-row	1.0	.97	.89	19	.18	.17
Harrow	15-foot	1.0	.22	.20	10	.02	.02
Ditch	6-foot	1.5	.11	.10	27	.04	.04
Corrugate	4-row	1.6	.56	.51	33	.30	.27
Irrigate	---	3.9	1.33	---	100	5.19	---
Cultivate	4-row	3.7	.58	.52	76	1.63	1.46
Cultivate	2-row	3.4	.77	.70	24	.63	.57
Hoe, contract	---	1.4	6.62	---	68	6.30	---
Dust, plane	---	1.4	---	---	38	---	---
Total preharvest						19.85	7.07
Cut	2-row	1.0	.98	.90	46	.45	.41
Cut	4-row	1.0	.61	.56	54	.33	.30
Rake	12-foot	1.0	.52	.47	27	.14	.13
Shock	---	1.0	3.92	---	70	2.74	---
Haul to thresher	---	1.0	2.81	2.46	9	.25	.22
Haul to thresher, t.	---	1.0	1.29	1.52	28	.36	---
Thresh, contract	28-inch	1.0	2.28	.42	37	.84	.16
Haul from thresher, t.	---	1.0	.31	.46	37	.11	---
Combine	6-foot	1.0	1.42	1.31	29	.41	.38
Combine, contract	6-foot	1.0	1.42	1.31	34	.48	.45
Haul, truck	1½-ton	1.0	.66	.71	63	.42	---
Total harvest						6.53	2.05
Total 1/						26.38	9.12

1/ In addition, truck use averaged 1.04 hours an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D5, COLORADO, 1950

The data presented here are based on a survey made in 1951 of approximately 38 farms producing dry beans under irrigation in 1950 in southwestern Colorado. These farms are located in type-of-farming areas VI-D5 which consist of a number of comparatively small irrigated areas in the San Juan Basin. Livestock and specialty crops are the most important enterprises on the farms in these areas.

The farms surveyed averaged 270 total acres per farm. In 1950, 185 acres were in crops, including 51 in beans. The average yield of beans was approximately 825 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 32; the most common was about 16.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.35	8.00	2.80	100	2.80
Dust (Arsenate-mg. and zinc)	Lb.	4.5	.36	1.62	55	.84
Water	Acre	1.0	2.25	2.25	100	2.25
Bags	No.	7.3	.25	1.82	12	.22
Twine	Lb.	.1	1.00	.10	28	.03
Total materials						6.14

CONTRACT WORK HIRED

Treating seed	Cwt.	.35	.40	.14	14	.02
Dusting	Acre	1/ 1.2	1.50	1.80	10	.18
Combining	Cwt.	8.25	.50	4.12	5	.21
Threshing	Cwt.	8.25	.40	3.30	15	.50
Hauling, truck	Cwt.	8.25	.07	.58	16	.09
Total contract work						1.00

1/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area VI-D5, southwestern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.82	0.79	22	0.18	0.17
Plow, moldboard	2-14 inch	1.0	1.36	1.30	50	.68	.65
Plow, chisel	6-foot	1.0	.68	.65	22	.15	.14
Disk, tandem	6-foot	1.0	.82	.75	12	.10	.09
Harrow, springtooth	8-foot	1.6	.53	.48	70	.60	.54
Harrow, spiketooth	15-foot	1.3	.28	.25	52	.19	.17
Level	9-foot	1.2	.41	.39	16	.08	.08
Weed	8-foot	1.3	.52	.47	10	.07	.06
Corrugate	3-row	1.0	.48	.44	9	.04	.04
Irrigate	---	1.0	5.35	---	9	.48	---
Plant	2-row	1.0	.74	.68	66	.49	.45
Plant	4-row	1.0	.36	.33	34	.12	.11
Harrow, spiketooth	15-foot	1.0	.30	.27	17	.05	.05
Cultivate, first	2-row	1.0	.83	.76	85	.71	.65
Cultivate, first	4-row	1.0	.46	.42	15	.07	.06
Cultivate, other	2-row	1.8	.64	.59	73	.84	.77
Cultivate, other	4-row	1.6	.49	.45	27	.21	.19
Ditch	---	1.0	.36	.19	75	.27	.14
Ditch by hand	---	1.0	.23	---	35	.08	---
Irrigate, first	---	1.0	5.71	---	100	5.71	---
Irrigate, other	---	1.9	5.50	---	80	8.36	---
Dust	4-row	1.2	.74	.49	45	.40	.26
Dust, contract	4-row	1.2	.74	.49	10	.09	.06
Weed by hand	---	1.1	2.73	---	58	1.74	---
Total preharvest						21.71	4.68
Cut	2-row	1.0	.72	.66	58	.42	.38
Cut	4-row	1.0	.40	.36	25	.10	.09
Rake	---	1.0	.54	.50	83	.45	.42
Cut and rake	2-row	1.0	.79	.73	17	.13	.12
Shock by hand	---	1.0	3.19	---	50	1.60	---
Combine	6-foot	1.0	1.50	.86	63	.94	.54
Combine, contract	6-foot	1.0	1.50	.86	5	.08	.04
Haul to thresher	---	1.0	2.52	.52	32	.81	.17
Thresh	---	1.0	2.70	.50	17	.46	.08
Thresh, contract	---	1.0	2.70	.50	15	.40	.08
Truck	1½-ton	1.0	.69	.63	84	.58	---
Truck, contract	1½-ton	1.0	.69	.63	16	.11	---
Total harvest						6.08	1.92
Total 1/						27.79	6.60

1/ In addition truck use averaged 0.63 hour an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D5, NEW MEXICO, 1950

The data presented here are based on a survey made in 1951 of approximately 23 farms producing dry beans under irrigation in 1950 in northwestern New Mexico. These farms are located in type-of-farming area VI-D5, a comparatively small irrigated area in the New Mexico portion of the San Juan Basin. Livestock and specialty crops are produced mostly on these farms.

The farms surveyed averaged about 135 total acres per farm. In 1950, 95 acres were in crops, including 27 in dry beans. The average yield of beans was approximately 1,535 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 13 to 19; the most common was about 14.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.40	8.75	3.50	100	3.50
Manure	Ton	6	1/2.00	12.00	31	3.72
Fertilizer (0-45-0)	Cwt.	1.25	3.60	4.50	19	.86
Copper arsenate	Lb.	4	.45	1.80	100	1.80
Water	Acre	1.0	4.00	4.00	100	4.00
Twine	Lb.	.1	1.20	.12	2/ 80	.10
Sacks	No.	16	furnished by buyer		100	---
Total materials						13.98

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Dusting	Acre	1.0	1.50	1.50	27	.40
Cutting	Acre	1.0	1.50	1.50	5	.08
Threshing	Cwt.	15.4	.25	3.85	63	2.43
Combining	Cwt.	15.4	.40	6.16	4	.25
Hauling	Cwt.	15.4	.10	1.54	43	.66
Total contract work						3.82

1/ Estimated.

2/ Twenty percent of twine furnished by buyer.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area VI-D5, northwestern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	75-bu.	1.0	4.65	4.65	31	1.44	1.44
Plow, moldboard	1-16 inch	1.0	2.31	2.20	100	2.31	2.20
Harrow, spiketooth	10-foot	1.0	.49	.45	100	.49	.45
Level	8-foot	1.1	.58	.56	60	.38	.37
Corrugate	3-row	1.0	.58	.52	100	.58	.52
Irrigate	---	1.0	5.40	---	100	5.40	---
Harrow, spiketooth	10-foot	1.0	.49	.45	100	.49	.45
Plant	2-row	1.0	1.08	.99	100	1.08	.99
Harrow, spiketooth	10-foot	1.5	.49	.45	90	.66	.61
Ditch	---	1.0	.40	.28	49	.20	.14
Ditch by hand	---	1.0	.26	---	60	.16	---
Cultivate	2-row	1.5	1.04	.94	100	1.56	1.41
Irrigate, first	---	1.0	5.00	---	100	5.00	---
Irrigate, other	---	3.1	4.25	---	100	13.18	---
Dust	5-row	1.0	.54	.44	63	.34	.28
Dust, contract	5-row	1.0	.54	.44	27	.15	.12
Weed	---	1.1	2.70	---	65	1.93	---
Total preharvest						35.35	8.98
Cut	2-row	1.0	1.08	.99	95	1.03	.94
Cut, contract	2-row	1.0	1.08	.99	5	.05	.05
Rake	---	1.0	1.26	1.16	28	.35	.32
Shock by hand	---	1.0	5.88	---	80	4.70	---
Haul to thresher	---	1.0	5.82	3.62	72	4.19	2.61
Thresh	---	1.0	1.08	.50	9	.10	.04
Thresh, contract	---	1.0	1.08	.50	63	.68	.32
Combine	6-foot	1.0	2.90	1.33	24	.70	.32
Combine, contract	6-foot	1.0	2.90	1.33	4	.12	.05
Haul, truck	1½-ton	1.0	.92	.55	57	.52	---
Haul, truck, contract	1½-ton	1.0	.92	.55	43	.40	---
Total harvest						12.84	4.65
Total 1/						48.19	13.63

1/ In addition, truck use averaged 0.55 hour an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, NEW MEXICO, 1950

The data presented here are based on a survey made in 1951 of 27 farms producing dry beans under irrigation in 1950 in north central New Mexico. These farms are located in a number of comparatively small irrigated areas in the southern Rocky Mountains. Livestock and specialty crops are produced mostly in these areas.

The farms surveyed averaged 590 total acres per farm. In 1950, 323 acres were in crops, including 82 in beans. The average yield of beans was approximately 860 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 31. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.25	7.50	1.88	100	1.88
Fertilizer (10-20-0)	Cwt.	1.1	3.65	4.02	14	.56
Dust	Lb.	4.5	.40	1.80	12	.22
Water	Acre	1.0	.60	.60	100	.60
Bags	No.	12	.32	3.84	24	.92
Twine	Lb.	.1	1.00	.10	25	.02
Total materials						4.20

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	.25	.40	.10	18	.02
Combining	Cwt.	8.6	.50	4.30	21	.90
Threshing	Cwt.	8.6	.30	2.58	2	.05
Hauling truck	Cwt.	8.6	.10	.86	17	.15
Total contract work						1.12

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area VI-D7, north central New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-14 inch	1.0	1.32	1.26	42	0.55	0.53
Plow, one-way	8-foot	1.0	.53	.50	14	.07	.07
Plow, lister	2-row	1.0	.57	.55	87	.50	.48
Plow, chisel	12-foot	1.0	.38	.37	15	.06	.06
Harrow, spiketooth	15-foot	1.0	.28	.25	26	.07	.07
Level	9-foot	2.1	.54	.51	32	.36	.34
Corrugate	4-row	1.0	.46	.42	93	.43	.39
Irrigate	---	1.0	2.35	---	93	2.19	---
Plant	2-row	1.0	.72	.66	18	.13	.12
Plant	4-row	1.0	.41	.37	82	.34	.30
Harrow, spiketooth	15-foot	1.0	.39	.36	10	.04	.04
Cultivate, first	2-row	1.0	.82	.75	18	.15	.14
Cultivate, first	4-row	1.0	.48	.44	82	.39	.36
Cultivate, other	2-row	1.8	.61	.56	18	.20	.18
Cultivate, other	4-row	1.5	.36	.33	82	.44	.41
Weed by hand	---	1.0	1.84	---	41	.75	---
Ditch	---	1.0	.36	.22	50	.18	.11
Irrigate, first	---	1.0	2.08	---	100	2.08	---
Irrigate, other	---	2.2	1.73	---	95	3.62	---
Dust	4-row	1.0	.78	.47	12	.09	.06
Total preharvest						12.64	3.66
Cut	2-row	1.0	.79	.73	30	.24	.22
Cut	4-row	1.0	.41	.37	11	.05	.04
Rake	---	1.0	.54	.50	41	.22	.21
Cut and rake	2-row	1.0	.82	.75	10	.08	.08
Cut and rake	4-row	1.0	.43	.40	48	.21	.19
Shock by hand	---	1.0	3.02	---	65	1.96	---
Combine	6-foot	1.0	1.31	.92	56	.73	.52
Combine, contract	6-foot	1.0	1.31	.92	21	.28	.19
Haul to thresher	---	1.0	4.08	2.80	23	.94	.64
Thresh	---	1.0	2.69	.70	21	.56	.15
Thresh, contract	---	1.0	2.69	.70	2	.05	.01
Haul, truck	1½-ton	1.0	.46	.42	83	.37	---
Haul, truck, contract	1½-ton	1.0	.46	.42	17	.08	---
Total harvest						5.77	2.65
Total 1/						18.41	6.31

1/ In addition, truck use averaged 0.42 hour an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, 1952

The data presented here are based on a survey made in 1952 of approximately 30 farms that produced dry beans under irrigation in 1952 in central Wyoming. These farms are located in type-of-farming area VI-D7, which is comprised of comparatively small irrigated valleys in the Intermountain region. The particular type-of-farming area in which these farms lie is located along Muddy Creek and Wind and Big Horn Rivers in central Wyoming. Much of the farming area is under newly established reclamation projects and many of the farms have been in operation only a few years. General farming prevails in the area.

The farms surveyed averaged about 210 acres per farm. In 1952, approximately 157 acres were in crops, including 29 in beans. The average yield of beans was about 1,730 pounds an acre. Dry beans are not grown widely in the area but tend to be grown mostly in localized areas.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 19 to 30; the most common was about 26.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Lb.	70	0.11	7.70	100	7.70
Manure	Ton	8	1/2.00	16.00	22	3.52
Mixed fertilizer (10-20-0)	Cwt.	1.25	4.45	5.56	14	.78
Nitrate fertilizer(33-0-0)	Cwt.	1.00	5.00	5.00	20	1.00
Phosphate fertilizer(0-43-0)	Cwt.	2.00	3.90	7.80	15	1.17
Water	Acre	1.0	2.50	2.50	100	2.50
Total materials						16.67

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Threshing	Cwt.	17.3	.30	5.19	3	.16
Combining	Acre	1.0	8.50	8.50	2	.17
Total contract work						.33

1/ Estimated.

Man labor, power, and machinery used by operation in producing
and harvesting dry beans, irrigated, area VI-D7,
central Wyoming, 1952

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	4.24	4.24	22	0.93	0.93
Disk, tandem	8-foot	1.7	.45	.43	40	.30	.29
Disk, tandem	10-foot	1.9	.35	.34	40	.26	.26
Plow, moldboard	1-18 inch	1.0	1.87	1.78	10	.19	.18
Plow, moldboard	2-14 inch	1.0	1.53	1.46	56	.86	.82
Plow, moldboard	2-16 inch	1.0	1.39	1.32	34	.47	.45
Harrow, spiketooth	15-foot	2.7	.29	.26	67	.52	.47
Harrow, spiketooth	20-foot	2.6	.23	.21	33	.20	.18
Fertilize	9-foot	1.0	.42	.37	15	.06	.06
Level	10-foot	1.9	.45	.43	100	.86	.82
Plant	4-row	1.0	.74	.68	53	.39	.36
Plant	6-row	1.0	.56	.52	47	.26	.24
Ditch	---	1.0	.43	.40	85	.37	.34
Cultivate	4-row	2.8	.71	.65	53	1.05	.96
Cultivate	6-row	2.5	.56	.51	47	.66	.60
Cultivate	10-foot	1.2	.46	.42	48	.26	.24
Hoe by hand	---	1.0	4.60	---	12	.55	---
Irrigate	---	5.9	4.75	---	100	28.02	---
Total preharvest						36.21	7.20
Cut	4-row	1.0	.78	.72	62	.48	.45
Cut	6-row	1.0	.55	.51	38	.21	.19
Rake	---	1.0	.70	.64	100	.70	.64
Turn under	---	1.0	1.13	---	10	.11	---
Haul to thresher	---	1.0	5.28	1.53	16	.84	.24
Thresh	---	1.0	2.22	.82	13	.29	.11
Thresh, contract	---	1.0	2.22	.82	3	.07	.02
Combine	---	1.0	1.56	1.32	82	1.28	1.08
Combine, contract	---	1.0	1.56	1.32	2	.03	.03
Haul, truck	---	1.0	1.29	1.28	100	1.29	---
Total harvest						5.30	2.76
Total 1/						41.51	9.96

1/ In addition, truck use averaged 1.28 hours an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-El, 1949

The data presented here are based on a survey made in 1950 of approximately 35 farms producing dry beans under irrigation in south central Idaho. These farms are located in type-of-farming area IX-El, a specialty crop and general farming area along the Snake River in southern Idaho.

The farms surveyed averaged 160 total acres per farm. In 1949, 146 acres were in crops, including 37 in dry beans. The average yield of beans was 1,900 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 12 to 21; the most common was about 16.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.00	9.94	9.94	100	9.94
Manure	Ton	10	1/ 2.00	20.00	20	4.00
Water	Acre	1.0	3.25	3.25	100	3.25
Total materials						17.19

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Weeding	Acre	1.0	1.38	1.38	55	.76
Combining	Acre	1.0	8.05	8.05	94	7.56
Hauling	Cwt.	19	.10	1.90	100	1.90
Total contract work						10.22

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area IX-E1, south central Idaho, 1949

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	4.25	3.85	20	0.85	0.77
Plow, moldboard	2-16 inch	1.0	1.41	1.34	35	.49	.47
Plow, moldboard	1-18 inch	1.0	2.00	1.80	31	.62	.56
Plow, moldboard	1-16 inch	1.0	2.30	2.19	34	.78	.74
Disk, tandem	7-foot	1.4	.70	.65	55	.54	.50
Harrow, springtooth	8-foot	1.8	.62	.57	19	.21	.20
Harrow, spiketooth	15-foot	3.9	.40	.37	100	1.56	1.44
Level	8-foot	1.1	.60	.55	72	.48	.43
Corrugate	4-row	1.0	.60	.57	99	.59	.56
Irrigate	---	1.0	3.24	---	99	3.21	---
Renovate	9-foot	1.0	.47	.45	50	.24	.22
Plant	4-row	1.0	.71	.66	95	.67	.63
Plant, horses	4-row	1.0	1.03	1.98	5	.05	---
Harrow, spiketooth	15-foot	1.2	.37	.34	75	.33	.31
Harrow, spiketooth, h.	10-foot	1.2	.67	1.39	7	.06	---
Cultivate, first	4-row	1.0	.76	.68	94	.71	.64
Cultivate, other	4-row	3.0	.70	.64	94	1.97	1.80
Cultivate, horses	4-row	4.2	.83	1.66	6	.21	---
Irrigate	---	6.3	1.90	---	100	11.97	---
Weed by hand	---	1.1	1.44	---	45	.71	---
Weed by hand, contract	---	1.1	1.44	---	55	.87	---
Ditch	---	1.0	.75	.38	75	.56	.28
Ditch by hand	---	1.0	.50	---	20	.10	---
Total preharvest						27.78	9.50
Cut	4-row	1.0	.70	.64	100	.70	.64
Rake	4-row	1.0	.73	.67	95	.69	.64
Rake, horses	4-row	1.0	.89	1.63	5	.04	---
Turn, side-delivery	---	1.0	.68	.62	14	.10	.09
Turn by hand	---	1.0	.54	---	61	.33	---
Combine	4-row	1.0	1.64	1.06	6	.10	.06
Combine, contract	4-row	1.0	1.64	1.06	94	1.54	1.00
Haul, truck, contract	1½-ton	1.0	1.40	1.30	100	1.40	---
Total harvest						4.90	2.43
Total 1/						32.68	11.93

1/ In addition, truck use averaged 1.30 hours an acre and horse work 0.72 hour an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F1, 1949

The data presented here are based on a survey made in 1950 of approximately 50 farms producing dry beans under irrigation in 1949 in north central Wyoming and south central Montana. These farms are located in type-of-farming area IX-F1, a general farming and specialized cropping area in the irrigated valleys along the Big Horn, Shoshone, and Yellowstone Rivers in Montana and Wyoming. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 150 acres per farm. Cropland comprised about 128 acres. In 1949, approximately 36 acres were in dry beans, and the yield averaged about 1,600 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 26; the most common size was about 22.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.70	9.60	6.72	100	6.72
Manure	Ton	10	1/ 2.00	20.00	13	2.60
Mixed fertilizer	Cwt.	1.25	3.65	4.56	14	.64
Sulphur dust	Lb.	30	.05	1.50	20	.30
Water	Acre	1.0	3.60	3.60	100	3.60
Total materials						13.86

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Dusting	Acre	1.0	1.90	1.90	6	.11
Weeding	Acre	2/ 1.5	4.65	6.98	41	2.86
Combining	Cwt.	16	.40	6.40	10	.64
Threshing	Cwt.	16	.35	5.60	25	1.40
Hauling	Cwt.	16	.50	8.00	7	.56
Total contract work						5.57

1/ Estimated.

2/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area IX-F1, north central Wyoming and south central Montana, 1949

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	4.00	3.63	13	0.52	0.47
Plow, moldboard	2-16 inch	1.0	1.38	1.31	41	.57	.54
Plow, moldboard	2-14 inch	1.0	1.51	1.44	37	.56	.53
Plow, moldboard	1-16 inch	1.0	2.31	2.20	19	.44	.42
Disk, tandem	12-foot	2.0	.37	.36	61	.45	.44
Harrow, spiketooth	15-foot	1.8	.41	.39	100	.74	.70
Level	10-foot	1.8	.44	.42	96	.76	.73
Corrugate	6-row	1.0	.35	.34	78	.27	.27
Irrigate	---	1.0	2.43	---	74	1.80	---
Plant	6-row	1.0	.56	.52	64	.36	.33
Plant	4-row	1.0	.82	.75	36	.30	.27
Harrow, spiketooth	15-foot	1.6	.30	.27	69	.33	.30
Cultivate, first	6-row	1.0	.62	.57	64	.40	.36
Cultivate, other	6-row	2.2	.56	.51	64	.79	.72
Cultivate, first	4-row	1.0	.75	.67	36	.27	.24
Cultivate, other	4-row	2.5	.69	.63	36	.62	.57
Hoe and weed by hand	---	1.1	1.86	---	58	1.19	---
Hoe and weed, contract	---	1.5	1.86	---	41	1.14	---
Irrigate	---	5.3	2.00	---	100	10.60	---
Dust and spray	12-row	1.4	.31	.27	14	.06	.05
Dust and spray, contract	12-row	1.0	.31	.27	6	.02	.02
Ditch	---	1.6	.50	.46	71	.57	.53
Ditch by hand	---	1.0	.50	---	23	.12	---
Total preharvest						22.88	7.49
Cut	6-row	1.0	.60	.55	55	.33	.30
Cut	4-row	1.0	.84	.77	45	.38	.35
Rake	6-row	1.0	.70	.64	100	.70	.64
Turn by hand	---	1.0	2.35	---	2	.05	---
Combine	6-row	1.0	1.54	1.18	53	.82	.63
Combine, contract	6-row	1.0	1.54	1.18	10	.15	.12
Shock and bunch by hand	---	1.0	2.05	---	33	.68	---
Haul to thresher	---	1.0	2.84	2.55	37	1.05	.94
Thresh	---	1.0	4.53	4.33	12	.54	.52
Thresh, contract	---	1.0	4.53	4.33	25	1.13	1.08
Haul, truck	1½-ton	1.0	1.06	1.15	93	.99	---
Haul, truck, contract	1½-ton	1.0	1.06	1.15	7	.07	---
Total harvest						6.89	4.58
Total 1/						29.77	12.07

1/ In addition, truck use averaged 1.15 hours an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F1, 1951

The data presented here are based on a survey made in 1951 of approximately 35 farms producing dry beans under irrigation in 1951 in north central Wyoming and south central Montana. These farms are located in type-of-farming area IX-F1, a general farming and specialized cropping area in the irrigated valleys along the Big Horn, Shoshone, and Yellowstone Rivers in Montana and Wyoming. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 240 acres per farm. Cropland comprised about 139 acres. In 1951, approximately 22 acres were in dry beans, and the yield averaged about 1,880 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 28. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.55	10.50	5.78	100	5.78
Manure	Ton	12	1/ 2.00	24.00	23	5.52
Mixed fertilizer	Cwt.	1.00	4.50	4.50	7	.32
Water	Acre	1.0	1.50	1.50	100	1.50
Total materials						13.12

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Weeding	Acre	2/3.2	7.60	24.32	42	10.21
Combining	Cwt.	18.8	.40	7.52	7	.53
Threshing	Cwt.	18.8	.35	6.58	55	3.62
Hauling	Cwt.	18.8	.20	3.76	7	.26
						14.62

1/ Estimated.
2/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting
dry beans, irrigated, area IX-F1, north central Wyoming
and south central Montana, 1951

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	75-bu.	1.0	6.27	6.27	23	1.44	1.44
Plow, moldboard	2-16 inch	1.0	1.26	1.21	38	.48	.46
Plow, moldboard	2-14 inch	1.0	1.50	1.43	62	.93	.89
Disk, tandem	8-foot	1.2	.58	.52	55	.38	.34
Harrow, spiketooth	15-foot	2.6	.32	.29	100	.83	.75
Level	10-foot	2.1	.47	.45	100	.99	.94
Plant	4-row	1.0	.92	.85	40	.37	.34
Plant	6-row	1.0	.56	.52	60	.34	.31
Harrow, spiketooth	15-foot	1.4	.29	.26	35	.14	.13
Ditch	---	1.0	.42	.28	100	.42	.28
Ditch by hand	---	1.0	.49	---	9	.04	---
Cultivate	4-row	3.7	.86	.79	40	1.27	1.17
Cultivate	6-row	3.9	.58	.52	60	1.36	1.22
Irrigate	---	3.9	2.75	---	100	10.72	---
Weed by hand	---	3.2	7.04	---	58	13.07	---
Weed by hand, contract	---	3.2	7.04	---	42	9.46	---
Total preharvest						42.24	8.27
Cut	4-row	1.0	.97	.89	62	.60	.55
Cut	6-row	1.0	.59	.54	38	.22	.21
Rake, side-delivery	---	1.0	.70	.64	100	.70	.64
Shock by hand	---	1.0	3.98	---	74	2.95	---
Haul to thresher	---	1.0	5.26	4.60	80	4.21	3.68
Thresh	---	1.0	1.08	.66	25	.27	.16
Thresh, contract	---	1.0	1.08	.66	55	.59	.36
Combine	6-foot	1.0	2.05	1.89	13	.27	.25
Combine, contract	6-foot	1.0	2.05	1.89	7	.14	.13
Haul, truck	1½-ton	1.0	1.04	1.36	90	.94	---
Haul, truck, contract	1½-ton	1.0	1.04	1.36	7	.07	---
Total harvest						10.96	5.98
Total 1/						53.20	14.25

1/ In addition, truck use averaged 1.32 hours an acre.

DRY BEANS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F2, 1951

The data presented here are based on a survey made in 1951 of approximately 55 farms producing dry field beans under irrigation in 1951 in southeastern Wyoming and west central Nebraska. These farms are located in type-of-farming area IX-F2, a specialized crop and general farming area along the North Platte and Laramie Rivers. The particular farms surveyed are diversified, producing livestock, hay, corn, small grains, and specialized crops.

The farms averaged about 235 acres per farm. Cropland comprised about 152 acres. In 1951, approximately 37 acres were in beans, and the yield was about 32 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 27. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.65	10.75	6.99	100	6.99
Manure	Ton	9	1/ 2.00	18.00	10	1.80
Mixed fertilizer (10-24-0)	Cwt.	1.20	4.15	4.98	15	.75
Nitrate fertilizer (33-0-0)	Cwt.	1.00	4.25	4.25	11	.47
Phosphate fertilizer (0-42-0)	Cwt.	1.00	3.80	3.80	21	.80
Sulphur dust	Lb.	25	.05	1.25	39	.49
Water	Acre	1.0	2.25	2.25	100	2.25
Total materials						13.55

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Weeding	Acre	1.0	4.50	4.50	45	2.02
Dusting	Acre	1.0	1.75	1.75	30	.52
Combining	Bu.	32	.30	9.60	25	2.40
Threshing	Bu.	32	.28	8.96	11	.99
Total contract work						5.93

[1] Estimated.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, irrigated, area IX-F2, southeastern Wyoming and west central Nebraska, 1951

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	75-bu.	1.0	4.56	4.56	10	0.46	0.46
Plow, moldboard	2-16 inch	1.0	1.26	1.21	70	.88	.85
Plow, moldboard	2-14 inch	1.0	1.50	1.43	30	.45	.43
Plow, subsoil	8-foot	1.9	.52	.49	22	.22	.20
Disk, tandem	8-foot	1.6	.55	.50	72	.63	.58
Harrow, spiketooth	15-foot	2.0	.31	.28	86	.53	.48
Cultipack	10-foot	1.0	.39	.36	25	.10	.09
Level	10-foot	1.5	.33	.32	86	.43	.41
Plant	4-row	1.0	.68	.63	68	.46	.43
Plant	6-row	1.0	.53	.48	32	.17	.15
Weed, rotary hoe	12-foot	1.4	.28	.25	48	.19	.17
Weed by hand	---	1.0	4.43	---	25	1.11	---
Weed by hand, contract	---	1.0	4.43	---	45	1.99	---
Harrow, spiketooth	15-foot	1.2	.28	.25	35	.12	.10
Corrugate	4-row	1.0	.46	.42	30	.14	.13
Ditch	---	1.0	.34	.21	75	.26	.16
Ditch by hand	---	1.0	.47	---	15	.07	---
Cultivate	4-row	3.0	.64	.59	68	1.31	1.20
Cultivate	6-row	3.0	.51	.46	32	.49	.44
Dust	24-foot	1.0	.24	.21	12	.03	.03
Dust, contract	24-foot	1.0	.24	.21	30	.07	.06
Irrigate	---	3.9	3.25	---	100	12.68	---
Total preharvest						22.79	6.37
Cut	4-row	1.0	.68	.63	100	.68	.63
Rake, side-delivery	7-foot	1.0	.70	.64	100	.70	.64
Combine	6-foot	1.0	1.46	1.35	55	.80	.74
Combine, contract	6-foot	1.0	1.46	1.35	25	.36	.34
Turn, side-delivery	7-foot	1.0	.89	.89	5	.04	.04
Shock by hand	---	1.0	4.21	---	15	.63	---
Haul to thresher	---	1.0	4.14	1.58	20	.83	.32
Thresh	22-inch	1.0	2.46	.50	9	.22	.04
Thresh, contract	22-inch	1.0	2.46	.50	11	.27	.06
Haul, truck	$1\frac{1}{2}$-ton	1.0	.87	1.09	100	.87	---
Total harvest						5.40	2.81
Total 1/						28.19	9.18

1/ In addition truck use averaged 1.09 hours an acre.

DRY BEANS: RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1950 of approximately 20 farms producing dry beans in southeastern Colorado and northeastern New Mexico. These farms are located in type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 825 acres per farm. Cropland comprised about 433 acres. In 1950, 120 acres were planted to dry beans. Because 1950 was a dry year, only about 87 percent of the acreage was harvested. The yield of 185 pounds per harvested acre also was considerably below the usual yield of approximately 300 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 10 to 36; the most common was about 21.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 1/	Cwt.	0.18	8.95	1.61	100	1.61
Total materials						1.61

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Threshing	Cwt.	1.85	.30	.56	22	.12
Combining	Acre	1.0	2.03	2.03	22	.45
Hauling	Cwt.	1.85	.24	.44	49	.22
Total contract work						.79

1/ Approximately 58 percent of the farmers in this area purchased dry bean seed.

Man labor, power, and machinery used by operation in producing and harvesting dry beans, area II-B2, southeastern Colorado and northeastern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, one-way	12-foot	1.2	0.30	0.28	32	0.12	0.11
Plow, Graham	11-foot	1.2	.33	.32	34	.14	.13
List	2-row	1.1	.53	.48	31	.18	.16
List	3-row	1.0	.38	.35	27	.10	.09
List	4-row	1.7	.30	.27	25	.13	.12
Plant, lister	2-row	1.0	.56	.52	67	.38	.35
Plant, lister	4-row	1.0	.30	.28	33	.10	.09
Cultivate, first	2-row	1.0	.45	.41	73	.33	.30
Cultivate, first	4-row	1.0	.25	.23	27	.07	.06
Cultivate, other	2-row	1.8	.46	.42	82	.68	.62
Cultivate, other	4-row	2.3	.26	.24	18	.11	.10
Total preharvest						2.34	2.13
Cut	2-row	1.0	.53	.48	1/ 16	.08	.08
Cut and pile	2-row	1.0	.59	.54	1/ 84	.50	.45
Rake, side-delivery	10-foot	1.0	.53	.48	1/ 14	.07	.07
Bunch by hand	---	1.0	1.30	---	1/ 67	.87	---
Haul to thresher	---	1.0	2.22	.29	1/ 27	.60	.08
Thresh	---	1.0	.36	.28	1/ 5	.02	.01
Thresh, contract	---	1.0	.36	.28	1/ 22	.08	.06
Combine	5-foot	1.0	.45	.35	1/ 39	.18	.14
Combine, contract	5-foot	1.0	.45	.35	1/ 22	.10	.08
Combine, self-propelled	12-foot	1.0	.41	.38	1/ 12	.05	---
Haul, truck	---	1.0	.21	.17	1/ 34	.07	---
Haul, truck, contract	---	1.0	.21	.17	1/ 49	.10	---
Total harvest						2.72	.97
Total 2/						5.06	3.10

1/ Harvested acreage only. Because of drought, only 87 percent of the planted acreage was harvested.

2/ In addition, truck use averaged 0.14 hour an acre and self-propelled combines 0.05 hour an acre.

DRY BEANS: RESOURCES USED IN PRODUCTION, AREA II-C3, 1950

The data presented here are based on a survey made in 1951 of approximately 60 farms producing dry beans in 1950 in southwestern Colorado. These farms are located in the west central border of type-of-farming area II-C3, and produce mostly livestock and specialty crops.

The farms surveyed averaged 490 acres per farm. Cropland comprised about 415 acres. In 1950, about 179 acres per farm were planted to beans. Approximately 168 acres were harvested with an average yield of 325 pounds of beans per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 32. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.15	7.60	1.14	100	1.14
Bags	No.	2.2	.30	.66	12	.08
Twine	Lb.	.04	1.00	.04	30	.01
Total materials						1.23

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Cwt.	3.25	.50	1.62	8	.13
Threshing	Cwt.	3.25	.40	1.30	7	.09
Hauling, truck	Cwt.	3.25	.07	.23	19	.04
Total contract work						.26

Man labor, power, and machinery used by operation in producing and harvesting dry beans, area II-C3, southwestern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.84	0.80	25	0.21	0.20
Plow, moldboard	2-14 inch	1.0	1.21	1.16	10	.12	.12
Plow, one-way	8-foot	1.0	.44	.42	15	.07	.06
Plow, chisel	8-foot	1.2	.45	.43	45	.24	.23
Disk, tandem	8-foot	1.5	.52	.47	20	.16	.14
Harrow, springtooth	12-foot	2.1	.29	.26	85	.52	.46
Harrow, spiketooth	15-foot	1.2	.28	.25	15	.05	.04
Plant	2-row	1.0	.59	.54	24	.14	.13
Plant	4-row	1.0	.26	.24	76	.20	.18
Harrow, spiketooth	15-foot	1.0	.25	.23	27	.07	.06
Cultivate, first	2-row	1.0	.63	.58	24	.15	.14
Cultivate, first	4-row	1.0	.30	.27	76	.23	.21
Cultivate, other	2-row	1.3	.53	.48	24	.17	.15
Cultivate, other	4-row	1.2	.23	.21	76	.21	.19
Weed by hand	---	1.0	1.90	---	82	1.56	---
Total preharvest						4.10	2.31
Cut	2-row	1.0	.48	.40	34	.16	.14
Cut	4-row	1.0	.29	.24	12	.03	.03
Rake	---	1.0	.29	.26	46	.13	.12
Cut and pile	2-row	1.0	.53	.44	9	.05	.04
Cut and pile	4-row	1.0	.32	.26	18	.06	.05
Cut and rake	2-row	1.0	.53	.48	27	.14	.13
Shock by hand	---	1.0	2.31	---	88	2.03	---
Combine	---	1.0	.60	.43	77	.46	.33
Combine, contract	---	1.0	.60	.43	8	.05	.03
Haul to thresher	---	1.0	2.30	.32	15	.34	.05
Thresh	---	1.0	1.63	.22	8	.13	.02
Thresh, contract	---	1.0	1.63	.22	7	.11	.02
Haul, truck	1½-ton	1.0	.29	.22	81	.23	---
Haul, truck, contract	1½-ton	1.0	.29	.22	19	.06	---
Total harvest						3.98	.96
Total 1/						8.08	3.27

1/ In addition truck use averaged 0.22 hour an acre.

DRY BEANS: RESOURCES USED IN PRODUCTION, AREA II-D1, 1950

The data presented here are based on a survey made in 1951 of approximately 17 farms producing dry beans in 1950 in Coconino County, Arizona. These farms are located in a comparatively small livestock and specialized-crop farming area near Flagstaff, Arizona. The elevation of the area is relatively high and is almost in the heart of type-of-farming area II-D1, a seasonal migratory grazing area in the Great Basin.

The farms surveyed averaged about 330 acres per farm. Cropland comprised 280 acres per farm. In 1950, about 180 acres were planted to beans. Approximately 170 acres were harvested with an average yield of about 465 pounds of beans per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 26. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.25	8.00	2.00	100	2.00
Bags	No.	4.4	.33	1.45	100	1.45
Twine	Lb.	.03	1.20	.04	100	.04
Total materials						3.49

CONTRACT WORK HIRED

Treating seed	Cwt.	.25	.30	.08	60	.05
Total contract work						.05

Man labor, power, and machinery used by operation in producing and harvesting dry beans, area II-D1, northern Arizona, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.82	0.79	26	0.21	0.21
Plow, subsoil	6-foot	1.1	.81	.78	80	.71	.69
Harrow, spiketooth	15-foot	1.1	.25	.23	42	.12	.11
Harrow, springtooth	12-foot	1.1	.34	.32	45	.17	.16
Plant	4-row	1.0	.64	.36	100	.64	.36
Cultivate, first	4-row	1.0	.59	.48	100	.59	.48
Cultivate, other	4-row	1.5	.59	.36	83	.73	.45
Total preharvest						3.17	2.46
Cut	2-row	1.0	.78	.72	33	.26	.24
Rake	---	1.0	.48	.44	33	.16	.15
Cut and rake	2-row	1.0	.78	.72	27	.21	.19
Cut and rake	4-row	1.0	.38	.35	40	.15	.14
Shock by hand	---	1.0	2.48	---	86	2.13	---
Move shocks	---	1.0	1.26	---	48	.61	---
Combine	6-foot	1.0	1.69	.60	70	1.18	.42
Haul to thresher	---	1.0	2.81	1.26	30	.84	.38
Thresh	---	1.0	1.32	.44	30	.40	.13
Haul, truck	1½-ton	1.0	.58	.21	100	.58	---
Total harvest						6.52	1.52
Total 1/						9.69	3.98

1/ In addition truck use averaged 0.34 hour an acre.

DRY BEANS: RESOURCES USED IN PRODUCTION, AREA IX-G1, 1950

The data presented here are based on a survey made in 1951 of approximately 50 farms producing dry beans in 1950 in central New Mexico. These farms are located in type-of-farming area IX-G1, a comparatively small area in the southern Rocky Mountains. The farms in this area are nonirrigated and dry beans are by far the most important crop produced on them.

The farms surveyed averaged 1,490 total acres per farm. In 1950, 520 acres were in crops, including 210 planted in beans. Approximately 180 acres of beans were harvested per farm, with an average yield of 190 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 31; the most common was about 26.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.15	7.35	1.10	100	1.10
Bags	No.	2	.30	.60	20	.12
Twine	Lb.	.03	.90	.03	18	.01
Total materials						1.23

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Cwt.	1.9	.50	.95	18	.17
Hauling	Cwt.	1.9	.10	.19	16	.03
Total contract work						.20

Man labor, power, and machinery used by operation in producing and harvesting dry beans, area IX-G1, central New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, lister	4-row	1.5	0.30	0.27	100	0.45	0.40
Weed	4-row	1.0	.30	.28	33	.10	.09
Plant	4-row	1.0	.36	.32	100	.36	.32
Cultivate, first	4-row	1.0	.36	.33	100	.36	.33
Cultivate, second	4-row	1.0	.31	.28	90	.28	.25
Cultivate, other	4-row	1.2	.30	.27	27	.10	.09
Weed by hand	---	1.0	2.30	---	25	.58	---
Total preharvest						2.23	1.48
Cut and rake	4-row	1.0	.47	.38	100	.47	.38
Shock by hand	---	1.0	1.54	---	68	1.05	---
Combine	4-row	1.0	.56	.34	75	.42	.26
Combine, contract	4-row	1.0	.56	.34	18	.10	.06
Haul to thresher	---	1.0	2.28	.48	7	.16	.03
Thresh	---	1.0	.62	.29	7	.04	.02
Haul, truck	1½-ton	1.0	.16	.15	84	.13	---
Haul, truck, contract	1½-ton	1.0	.16	.15	16	.03	---
Total harvest						2.40	.75
Total 1/						4.63	2.23

1/ In addition truck use averaged 0.15 hour an acre.

BROOMCORN: RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of 15 farms producing broomcorn in southeastern Colorado. These farms are located in the eastern edge of the Colorado portion of type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 1,153 acres per farm. Cropland comprised about 904 acres. In 1950, 220 acres were in broomcorn, and the yield averaged 231 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 9 to 36; the most common was about 23.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Lb.	1.9	0.19	0.36	1/ 131	0.47
Binder twine	Lb.	.5	.30	.15	19	.03
Total materials						.50

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Cutting	Ton	.12	75.00	9.00	64	5.76
Ricking	Ton	.12	17.20	2.06	80	1.65
Threshing	Ton	.12	31.00	3.72	76	2.83
Baling	Ton	.12	7.80	.94	100	.94
Hauling	Ton	.12	4.70	.56	51	.29
Total contract work						11.47

1/ Approximately 31 percent of the acreage was replanted.

Man labor, power, and machinery used by operation in producing and harvesting broomcorn, area II-B2, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Cut stalks	4-row	1.3	0.28	0.26	23	0.08	0.08
Cut stalks	6-row	1.3	.16	.16	22	.05	.05
Plow, one-way	12-foot	1.6	.30	.28	53	.25	.24
List	3-row	1.0	.34	.32	21	.07	.07
Disk, single	21-foot	1.0	.22	.21	13	.03	.03
Plant, lister	3-row	1.0	.41	.38	75	.31	.28
Plant, lister	4-row	1.0	.29	.26	25	.07	.06
Replant, lister	4-row	1.8	.29	.26	17	.09	.08
Harrow, spiketooth	16-foot	1.1	.17	.16	67	.13	.12
Cultivate, knife-sled	3-row	1.0	.31	.28	100	.31	.28
Cultivate	3-row	1.0	.31	.28	100	.31	.28
Total preharvest						1.70	1.57
Cut by hand	---	1.0	12.89	---	17	2.19	---
Cut by hand, contract	---	1.0	12.89	---	64	8.25	---
Bind	2-row	1.0	1.24	.64	19	.24	.12
Rick	---	1.0	2.76	1.26	20	.55	.25
Rick, contract	---	1.0	2.76	1.26	80	2.21	1.00
Thresh	---	1.0	1.75	.08	24	.42	.02
Thresh, contract	---	1.0	1.75	.08	76	1.33	.06
Bale, contract	---	1.0	1.75	.08	100	1.75	.08
Haul, truck	1½-ton	1.0	.19	.08	43	.08	---
Haul, truck, contract	1½-ton	1.0	.30	.09	51	.15	---
Total harvest						17.17	1.53
Total 1/						18.87	3.10

1/ In addition, truck use averaged 0.08 hour an acre.

CORN FOR GRAIN (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A1, 1949

The data presented here are based on a survey made in 1950 of 19 farms producing corn for grain in irrigated portions of central Washington. These farms are located in type-of-farming area I-A1, a fruit and mixed-farming area in the Yakima River Valley.

The farms surveyed averaged about 77 acres per farm. Cropland comprised about 65 acres. In 1949, 9 acres were in irrigated corn for grain, and the yield averaged approximately 92 bushels per acre.

Tractors and motorized equipment provided most of the power used on these farms, although horses were used for some operations. The drawbar-horsepower rating of the tractors ranged from 8 to 26; the most common was about 16.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	0.17	10.95	1.86	100	1.86
Manure	Ton	7	1/ 2.00	14.00	31	4.34
Mixed fertilizer (16-20-0)	Cwt.	2.30	3.75	8.62	19	1.64
Nitrate fertilizer(21-0-0)	Cwt.	1.70	3.90	6.63	12	.80
Sulphur	Cwt.	8.00	2.25	18.00	5	.90
Water	Acre	1.0	5.10	5.10	100	5.10
Total materials						14.64

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Plowing	Acre	1.0	7.50	7.50	10	.75
Disking	Acre	2.0	3.00	6.00	6	.36
Picking by hand	Acre	1.0	20.00	20.00	9	1.80
Picking	Acre	1.0	9.70	9.70	34	3.30
Total contract work						6.21

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting corn for grain, irrigated, area I-A1, central Washington, 1949

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	4.73	1.49	8	0.38	0.12	---
Apply manure, loader-sp.	---	1.0	3.49	3.49	23	.80	.80	---
Plow, moldboard	2-16 inch	1.0	1.21	1.15	52	.63	.60	---
Plow, moldboard, contract	2-16 inch	1.0	1.21	1.15	10	.12	.11	---
Plow, moldboard	1-16 inch	1.0	2.25	2.15	38	.86	.82	---
Disk, tandem	6-foot	3.8	.75	.71	70	2.00	1.89	---
Disk, tandem, contract	6-foot	2.0	.75	.71	6	.09	.09	---
Disk, single	7-foot	3.5	1.15	1.10	17	.68	.65	---
Fertilize, drill	8-foot	1.0	.72	.63	31	.22	.20	---
Harrow, spiketooth	15-foot	2.5	.30	.27	76	.57	.52	---
Harrow, spiketooth, h.	10-foot	3.2	.89	1.69	18	.51	---	0.97
Ditch	3-row	1.0	.64	.58	51	.33	.30	---
Irrigate	---	1.0	1.97	---	51	1.00	---	---
Float, wooden	8-foot	1.5	.64	.61	9	.09	.08	---
Level, steel	6-foot	1.5	.55	.52	15	.12	.12	---
Roll	6-foot	1.0	.38	.35	6	.02	.02	---
Plant	2-row	1.0	1.36	.96	74	1.01	.71	---
Plant, horses	2-row	1.0	1.32	2.53	26	.34	---	.66
Cultivate	2-row	2.5	1.02	.93	75	1.91	1.74	---
Cultivate, horses	1-row	2.5	2.17	4.16	25	1.36	---	2.60
Corrugate	3-row	1.0	.64	.58	25	.16	.14	---
Irrigate	---	3.7	1.97	---	100	7.29	---	---
Hoe by hand	---	1.0	5.25	---	3	.16	---	---
Total preharvest						20.65	8.91	4.23
Pick by machine	1-row	1.0	1.92	1.76	24	.46	.42	---
Pick by machine, contract	2-row	1.0	1.14	1.04	34	.39	.35	---
Haul from picker	---	1.0	2.71	1.42	58	1.57	.82	---
Pick by hand and haul	---	1.0	17.71	7.22	15	2.66	1.08	---
Pick by hand and haul, c.	---	1.0	17.71	7.22	9	1.59	.65	---
Pick by hand and haul, h.	---	1.0	16.00	23.00	18	2.88	---	4.14
Total harvest						9.55	3.32	4.14
Total						30.20	12.23	8.37

Note: c. = operation performed on contract basis.

CORN FOR GRAIN (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A5, 1952

The data presented here are based on a survey made in 1952 of approximately 55 farms producing corn under irrigation in 1952 in west central Colorado. These farms are located in type-of-farming area I-A5, which is comprised of comparatively small irrigated valleys at the foot of the Rocky Mountains in west central Colorado. Fruit and mixed farming predominates in this area. The farms are comparatively small units but are intensively operated.

The farms surveyed averaged about 92 acres per farm. In 1952, 73 acres were in crops, including 11.4 in corn for grain. The average yield of corn was about 73 bushels an acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 12 to 26; the most common was about 19.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	10	0.21	2.10	100	2.10
Manure	Ton	8	1/2.00	16.00	36	5.76
Mixed fertilizer (7-21-7)	Cwt.	1.50	4.10	6.15	8	.49
Nitrate fertilizer (33-0-0)	Cwt.	1.70	4.40	7.48	23	1.72
Phosphate fertilizer (0-43-0)	Cwt.	2.00	3.85	7.70	32	2.46
Spray (2,4-D)	Pt.	1.6	.75	1.20	33	.40
Spray (25% DDT)	Pt.	1.5	.35	.52	6	.03
Water	Acre	1.0	2.50	2.50	100	2.50
Total materials						15.46

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Fertilizing (82-0-0) 2/	Acre	1.0	13.00	13.00	40	5.20
Picking	Acre	1.0	6.00	6.00	20	1.20
Total contract work						6.40

1/ Estimated. 2/ Approximately 160 pounds an acre were applied.

Man labor, power, and machinery used by operation in producing and harvesting corn for grain, irrigated, area I-A5, west central Colorado, 1952

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	4.40	4.40	36	1.58	1.58
Plow, moldboard	1-16 inch	1.0	2.19	2.09	38	.83	.79
Plow, moldboard	2-14 inch	1.0	1.45	1.39	62	.90	.86
Harrow, spiketooth	10-foot	2.2	.44	.40	51	.49	.45
Harrow, spiketooth	15-foot	3.0	.30	.27	35	.32	.28
Disk, tandem	7-foot	1.5	.66	.63	45	.45	.42
Disk, tandem	8-foot	2.1	.54	.51	53	.60	.57
Level	8-foot	1.7	.56	.54	94	.89	.86
Fertilize	8-foot	1.0	.43	.38	40	.17	.15
Irrigate	---	1.0	5.90	---	65	3.84	---
Plant	2-row	1.0	.86	.79	100	.86	.79
Field cultivate	9-foot	1.3	.39	.36	69	.35	.32
Ditch	"D"	1.0	.41	.37	57	.23	.21
Irrigate	---	3.8	5.45	---	100	20.71	---
Cultivate	2-row	2.8	.86	.79	100	2.41	2.21
Spray	18-foot	1.0	.42	.38	39	.16	.15
Total preharvest						34.79	9.64
Pick by hand	---	1.0	7.22	3.62	33	2.38	1.19
Haul, truck	---	1.0	4.13	3.77	33	1.36	---
Pick by machine	1-row	1.0	1.84	1.68	47	.86	.79
Pick by machine, contract	1-row	1.0	1.84	1.68	20	.37	.34
Haul from picker, truck	---	1.0	2.07	1.34	67	1.39	---
Total harvest						6.36	2.32
Total 1/						41.15	11.96

1/ In addition, truck use averaged 2.14 hours an acre.

CORN FOR GRAIN (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of 11 farms producing corn for grain under irrigation in southeastern Colorado. These farms are located in irrigated valleys of the Colorado portion of type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 193 acres per farm. Cropland comprised about 70 acres. In 1950, 13 acres were in irrigated corn for grain, and the yield averaged about 49 bushels per acre.

Tractors provided most of the power used on these farms, although horses were used for some operations. The drawbar-horsepower rating of the tractors ranged from 9 to 26; the most common was about 14.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Bu.	0.14	9.50	1.33	100	1.33
Manure	Ton	10	1/ 2.00	20.00	3	.60
Phosphate fertilizer	Cwt.	3.00	2.00	6.00	12	.72
Water	Acre	1.0	3.00	3.00	100	3.00
Twine	Lb.	4.5	.30	1.35	22	.30
Total materials						5.95

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Picking	Acre	1.0	6.83	6.83	23	1.57
Picking by hand	Acre	1.0	8.00	8.00	10	.80
Total contract work						2.37

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting corn for grain, irrigated, area II-B2, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	3.24	1.48	3	0.10	0.04
Fertilize, spreader	9-foot	1.0	.48	.42	12	.06	.05
Plow, moldboard	1-14 inch	1.0	2.61	2.49	49	1.28	1.22
Plow, one-way	14-foot	2.0	.23	.22	37	.17	.16
Plow, Graham	8-foot	3.0	.94	.89	7	.20	.19
Disk, tandem	6-foot	1.5	.62	.59	48	.45	.42
Harrow, spiketooth	15-foot	2.0	.33	.30	33	.22	.20
Level, steel	8-foot	1.9	.69	.66	46	.60	.58
Irrigate	---	1.0	2.80	---	11	.31	---
Plant	2-row	1.0	.84	.77	100	.84	.77
Harrow, spiketooth	10-foot	1.3	.46	.42	23	.14	.13
Ditch	6-foot	1.0	.10	.09	27	.03	.02
Corrugate	7-foot	1.0	.69	.63	9	.06	.06
Cultivate, first	2-row	1.0	.89	.81	91	.81	.74
Cultivate, first, horse	2-row	1.0	2.30	3.30	9	.21	---
Cultivate, other	2-row	1.7	.66	.60	91	1.02	.93
Cultivate, other, horse	2-row	1.2	2.04	3.30	23	.56	---
Irrigate	---	2.7	1.16	---	100	3.13	---
Hoe	---	1.0	5.75	---	3	.17	---
Total preharvest						10.36	5.51
Pick by machine, contract	1-row	1.0	1.74	1.60	23	.40	.37
Haul	---	1.0	1.67	1.52	23	.38	.35
Pick by hand & haul	---	1.0	8.38	7.68	18	1.51	1.38
Pick by hand & haul, h.	---	1.0	9.23	16.92	27	2.49	---
Hand pick & pile, contract	---	1.0	18.46	---	10	1.85	---
Bind	1-row	1.0	1.99	1.75	19	.38	.33
Shock	---	1.0	8.73	---	19	1.66	---
Husk and haul	---	1.0	---	---	19	---	---
Cut by hand & shock	---	1.0	11.00	---	3	.33	---
Haul to thresher	---	1.0	10.00	2.30	3	.30	.07
Thresh	---	1.0	1.68	1.54	3	.05	.05
Total harvest 1/						9.35	2.55
Total 2/						19.71	8.06

1/ Excludes husking and hauling from shock as needed for which no rates were available.

2/ In addition, horse work averaged 5.78 hours an acre.

CORN FOR GRAIN (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of 34 farms producing corn for grain under irrigation. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in southeastern Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms surveyed averaged about 268 acres per farm. Cropland comprised about 196 acres. In 1950, 34 acres were in corn for grain, and the yield averaged about 51 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 9 to 32; the most common was about 20.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Bu.	0.18	10.80	1.94	100	1.94
Manure	Ton	9	[1] 2.00	18.00	4	.72
Mixed fertilizer	Cwt.	1.75	3.95	6.91	8	.55
Nitrate fertilizer	Cwt.	1.25	4.10	5.12	3	.15
Phosphate fertilizer	Cwt.	.75	4.00	3.00	6	.18
Spray (2,4-D)	Pt.	.9	.73	.66	6	.04
Water, ditch	Acre	1.0	2.35	2.35	100	2.35
Water, pump	Acre	1.0	2.00	2.00	4	.08
Twine, binder	Lb.	5.3	.21	1.11	4	.04
Total materials						6.05

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying, airplane [2]	Acre	1.0	2.65	2.65	20	.53
Picking, mechanical	Bu.	51	.11	5.61	20	1.12
Hand picking & hauling	Acre	1.0	7.40	7.40	4	.30
Threshing	Bu.	51	.07	3.57	4	.14
Total contract work						2.09

[1] Estimated.

[2] Cost includes spray materials.

Man labor, power, and machinery used by operation in producing and harvesting corn for grain, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	60-bu.	1.0	3.08	1.40	4	0.12	0.06
Fertilize, spreader	9-foot	1.0	.66	.58	3	.02	.02
Plow, moldboard	2-14 inch	1.0	1.32	1.26	77	1.02	.97
Plow, Graham	8-foot	1.0	.65	.62	12	.08	.07
Disk, tandem	8-foot	1.2	.52	.49	52	.32	.31
Disk, tandem	6-foot	1.9	.63	.60	28	.34	.32
List	2-row	1.0	.52	.47	29	.15	.14
Harrow, spiketooth	15-foot	2.3	.24	.22	76	.42	.39
Level	9-foot	2.2	.51	.48	41	.46	.43
Level	12-foot	2.2	.38	.37	36	.30	.29
Level, wooden	10-foot	2.6	.51	.48	7	.09	.09
Roll	10-foot	2.0	.31	.28	11	.07	.06
Irrigate	---	1.0	1.37	---	12	.16	---
Plant, surface	2-row	1.0	.80	.74	25	.20	.18
Plant, lister	2-row	1.0	.58	.52	48	.28	.25
Plant, lister	4-row	1.0	.40	.37	27	.11	.10
Harrow, spiketooth	15-foot	1.0	.26	.24	53	.14	.13
Ditch	6-foot	2.0	.10	.09	28	.05	.05
Corrugate	4-row	1.4	.59	.54	7	.06	.05
Irrigate	---	3.5	1.37	---	100	4.80	---
Cultivate	2-row	2.8	.71	.65	81	1.61	1.47
Cultivate	4-row	2.8	.52	.47	19	.28	.25
Spray	4-row	1.0	.42	.37	6	.02	.02
Spray, airplane	---	1.0	----	---	20	---	---
Total preharvest						11.10	5.65
Pick by machine	1-row	1.0	1.42	1.30	11	.16	.14
Pick by machine	2-row	1.0	1.51	.81	52	.79	.42
Pick by machine, c.	2-row	1.0	1.51	.81	20	.30	.16
Pick by hand and haul	---	1.0	18.47	4.46	9	1.66	.40
Pick by hand, contract	---	1.0	18.47	4.46	4	.74	.18
Bind	1-row	1.0	2.04	1.50	4	.08	.06
Shock by hand	---	1.0	5.56	---	4	.22	---
Haul to thresher	---	1.0	3.15	2.90	4	.13	.12
Thresh	---	1.0	3.02	1.11	4	.12	.04
Haul from picker	---	1.0	.90	.82	82	.74	.67
Haul, truck	2-ton	1.0	1.55	1.42	5	.08	---
Total harvest						5.02	2.19
Total 1/						16.12	7.84

1/ In addition, truck use averaged 0.07 hour an acre.

Note: c. = operation performed on contract basis.

CORN FOR GRAIN (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F2, 1951

The data presented here are based on a survey made in 1951 of approximately 40 farms producing corn under irrigation in 1951 in southeastern Wyoming and west central Nebraska. These farms are located in type-of-farming area IX-F2, a specialized crop and general farming area along the North Platte and Laramie Rivers. The particular farms surveyed are diversified, producing livestock, hay, corn, small grains, and specialized crops.

The farms averaged about 165 acres per farm. Cropland comprised about 139 acres. In 1951, approximately 24 acres were in corn, and the yield was about 60 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 27. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.10	11.75	1.18	100	1.18
Manure	Ton	12	1/2.00	24.00	11	2.64
Nitrate fertilizer (33-0-0)2/	Cwt.	1.40	4.15	5.81	41	2.38
Spray (2,4-D)	Pt.	1.0	.50	.50	35	.18
Water	Acre	1.0	1.90	1.90	100	1.90
Total materials						8.28

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Weeding	Acre	1.0	4.25	4.25	4	.17
Spraying	Acre	1.0	1.50	1.50	11	.16
Picking and hauling	Acre	1.0	5.50	5.50	24	1.32
Total contract work						1.65

1/ Estimated.

2/ Practically all of mixed fertilizers are applied as a side-dressing either at planting time or in connection with cultivating.

Man labor, power, and machinery used by operation in producing and harvesting corn for grain, irrigated, area IX-F2, southeastern Wyoming and west central Nebraska, 1951

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	75 bu.	1.0	6.38	6.38	11	0.70	0.70
Plow, moldboard	2-16 inch	1.0	1.26	1.21	60	.76	.73
Plow, moldboard	2-14 inch	1.0	1.50	1.43	40	.60	.57
Disk, tandem	8-foot	1.2	.55	.50	46	.30	.28
Harrow, springtooth	9-foot	1.3	.55	.50	28	.20	.18
Harrow, spiketooth	15-foot	1.8	.31	.28	75	.42	.38
Level	10-foot	1.4	.47	.45	76	.50	.48
Plant	2-row	1.0	.86	.79	73	.63	.58
Plant	4-row	1.0	.49	.44	27	.13	.12
Weed, rotary hoe	11-foot	1.8	.34	.32	60	.37	.35
Weed by hand	---	1.0	6.09	---	6	.37	---
Weed by hand, contract	---	1.0	6.09	---	4	.24	---
Cultivate	2-row	2.8	.64	.59	100	1.79	1.65
Spray	6-row	1.0	.39	.36	24	.09	.09
Spray, contract	6-row	1.0	.39	.36	11	.04	.04
Ditch	---	1.0	.24	.16	86	.21	.14
Ditch by hand	---	1.0	.47	---	10	.05	---
Irrigate	---	3.0	3.62	---	100	10.86	---
Total preharvest						18.26	6.29
Pick and haul	1-row	1.0	1.69	1.55	42	.71	.65
Pick and haul	2-row	1.0	.78	.72	26	.20	.19
Pick and haul, contract	2-row	1.0	.78	.72	24	.19	.17
Pick by hand and haul	---	1.0	11.40	8.91	8	.91	.71
Total harvest						2.01	1.72
Total						20.27	8.01

CORN FOR GRAIN: RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of 26 farms producing nonirrigated corn for grain in southeastern Colorado and northeastern New Mexico. These farms are located in type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 1,668 acres per farm. Cropland comprised about 629 acres. In 1950, 48 acres were in nonirrigated corn for grain, and the yield averaged slightly more than 15 bushels per acre.

Tractors and motorized equipment provided most of the power used on these farms, although horses were used for hauling on some farms where corn was picked by hand. The drawbar-horsepower rating of the tractors ranged from 14 to 36; the most common was about 23.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Bu.	0.10	8.60	0.86	100	0.86
Spray (2,4-D)	Pt.	1.0	.70	.70	8	.06
Total materials						.92

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Picking	Acre	1.0	3.00	3.00	3	.09
Total contract work						.09

Man labor, power, and machinery used by operation in producing and harvesting corn for grain, area II-B2, southeastern Colorado and northeastern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Cut stalks	4-row	1.0	0.28	0.26	3	0.01	0.01
Plow, one-way	12-foot	1.3	.25	.24	20	.06	.06
Plow, Graham	10-foot	1.3	.35	.34	24	.11	.11
Disk, single	21-foot	1.3	.22	.21	8	.02	.02
List	2-row	1.0	.54	.49	28	.15	.14
List	3-row	1.0	.37	.34	36	.13	.12
Plant, lister	2-row	1.0	.51	.46	51	.26	.23
Plant, lister	3-row	1.0	.32	.29	49	.16	.14
Harrow, spiketooth	20-foot	1.1	.15	.14	26	.04	.04
Cultivate, knife-sled	2-row	1.1	.38	.35	49	.21	.19
Cultivate, knife-sled	3-row	1.1	.25	.23	47	.13	.12
Cultivate	2-row	1.3	.40	.37	55	.29	.26
Cultivate	3-row	1.5	.26	.24	42	.16	.15
Spray	21-foot	1.0	.22	.19	8	.02	.02
Total preharvest						1.75	1.61
Pick by hand & haul	---	1.0	4.28	2.07	18	.77	.37
Pick by hand & haul, h.	---	1.0	4.30	4.93	30	1.29	---
Pick by machine	1-row	1.0	1.19	.99	26	.31	.26
Pick by machine	2-row	1.0	.74	.60	23	.17	.14
Pick by machine, c.	2-row	1.0	.74	.60	3	.02	.02
Haul	---	1.0	.72	.60	25	.18	.15
Haul, truck	---	1.0	.69	.66	27	.19	---
Total harvest						2.93	.94
Total 1/						4.68	2.55

1/ In addition, horse work averaged 1.48 hours an acre and truck use 0.18 hour an acre.

Note: c. = operation performed on contract basis.

CORN FOR SILAGE (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A5, 1952

The data presented here are based on a survey made in 1952 of approximately 55 farms producing corn under irrigation in 1952 in west central Colorado. These farms are located in type-of-farming area I-A5 which is comprised of comparatively small irrigated valleys at the foot of the Rocky Mountains in west central Colorado. Fruit and mixed farming predominates in this area. The farms are comparatively small units but are intensively operated.

The farms surveyed averaged about 145 acres per farm. In 1952, 130 acres were in crops, including 17.8 in corn for silage. The average yield of corn for silage was about 11.8 tons an acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 12 to 26; the most common was about 19.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Lb.	10	0.21	2.10	100	2.10
Manure	Ton	8	[1]2.00	16.00	36	5.76
Mixed fertilizer (7-21-7)	Cwt.	1.50	4.10	6.15	8	.49
Nitrate fertilizer (33)	Cwt.	1.70	4.40	7.48	23	1.72
Phosphate fertilizer (43)	Cwt.	2.00	3.85	7.70	32	2.46
Spray (2,4-D)	Pt.	1.6	.75	1.20	33	.40
Spray (25% DDT)	Pt.	1.5	.35	.52	6	.03
Water	Acre	1.0	2.50	2.50	100	2.50
Total materials						15.46

CONTRACT WORK HIRED

Fertilizing (82-0-0) [2]	Acre	1.0	13.00	13.00	40	5.20
Field chopping	Acre	1.0	13.00	13.00	16	2.08
Total contract work						7.28

[1] Estimated.

[2] Approximately 160 pounds an acre were applied.

Man labor, power, and machinery used by operation in producing and harvesting corn for silage, irrigated, area I-A5, west central Colorado, 1952

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	4.40	4.40	36	1.58	1.58
Plow, moldboard	1-16 inch	1.0	2.19	2.09	38	.83	.79
Plow, moldboard	2-14 inch	1.0	1.45	1.39	62	.90	.86
Harrow, spiketooth	10-foot	2.2	.44	.40	51	.49	.45
Harrow, spiketooth	15-foot	3.0	.30	.27	35	.32	.28
Disk, tandem	7-foot	1.5	.66	.63	45	.45	.42
Disk, tandem	8-foot	2.1	.54	.51	53	.60	.57
Level	8-foot	1.7	.56	.54	94	.89	.86
Fertilize	8-foot	1.0	.43	.38	40	.17	.15
Irrigate	---	1.0	5.90	---	65	3.84	---
Plant	2-row	1.0	.86	.79	100	.86	.79
Field cultivate	9-foot	1.3	.39	.36	69	.35	.32
Ditch	"D"	1.0	.41	.37	57	.23	.21
Irrigate	---	3.8	5.45	---	100	20.71	---
Cultivate	2-row	2.8	.86	.79	100	2.41	2.21
Spray	18-foot	1.0	.42	.38	39	.16	.15
Total preharvest						34.79	9.64
Field chop	1-row	1.0	2.29	1.75	84	1.92	1.47
Field chop, contract	1-row	1.0	2.29	1.75	16	.37	.28
Haul to silo, truck	1½-ton	1.0	3.21	2.47	100	3.21	---
Blow into silo	---	1.0	3.67	1.98	100	3.67	1.98
Total harvest						9.17	3.73
Total 1/						43.96	13.37

1/ In addition, truck use averaged 2.47 hours an acre.

CORN FOR SILAGE (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-A3, 1949

The data presented here are based on a survey in 1950 of approximately 15 farms producing corn for silage under irrigation in 1949 in east central Utah. These farms are located in the irrigated valleys along the Colorado, Strawberry, and Green Rivers in Utah. These valleys comprise comparatively small portions of type-of-farming area II-A3, a seasonal migratory grazing area. The particular farms surveyed are for the most part general farms, producing livestock, corn, and small grains. Some of the farmers operate additional grazing or nonirrigated units in connection with their irrigated land.

The farms surveyed averaged about 200 acres per farm. Cropland comprised about 92 acres. In 1949, approximately 7 acres were in corn for silage, and the yield averaged 12 tons per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 20; the most common was about 16.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	0.15	16.00	2.40	100	2.40
Manure	Ton	12	1/ 2.00	24.00	57	13.68
Phosphate fertilizer	Cwt.	1.50	4.00	6.00	29	1.74
Spray (2,4-D)	Pt.	1.0	.75	.75	46	.34
Twine	Lb.	3.0	.35	1.05	38	.40
Water	Acre	1.0	1.50	1.50	100	1.50
Total materials						20.06

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	3.00	3.00	24	.72
Chopping	Acre	1.0	10.00	10.00	27	2.70
Total contract work						3.42

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting corn for silage, irrigated, area II-A3, east central Utah, 1949

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	4.87	3.61	48	2.34	1.73	---
Apply manure, horses-sp.	75-bu.	1.0	11.73	11.73	9	1.06	---	1.06
Plow, moldboard	2-14 inch	1.0	1.52	1.45	65	.99	.94	---
Plow, moldboard	1-16 inch	1.0	2.47	2.35	35	.86	.82	---
Disk, tandem	7-foot	1.3	.86	.82	41	.46	.44	---
Harrow, spiketooth	10-foot	2.0	.59	.54	87	1.03	.94	---
Harrow, spiketooth, h.	10-foot	2.0	1.26	3.35	13	.33	---	.87
Level	9-foot	1.4	.67	.61	69	.65	.59	---
Level, horses	8-foot	1.0	1.37	3.50	13	.18	---	.46
Plant	2-row	1.0	.89	.81	65	.59	.53	---
Plant, horses	2-row	1.0	.97	1.94	35	.34	---	.68
Cultivate	2-row	3.3	.86	.82	80	2.27	2.17	---
Cultivate, horses	2-row	3.5	1.69	3.38	20	1.18	---	2.37
Harrow, spiketooth	10-foot	1.0	.68	.62	54	.37	.33	---
Harrow, spiketooth, h.	10-foot	1.0	1.30	2.60	16	.21	---	.42
Irrigate	---	3.0	3.28	---	100	9.84	---	---
Spray	22-foot	1.0	.91	.87	22	.20	.19	---
Spray, contract	22-foot	1.0	.91	.87	24	.22	.21	---
Ditch	---	2.1	1.28	.55	51	1.37	.59	---
Ditch, horses	---	1.0	2.30	2.30	6	.14	---	.14
Ditch by hand	---	1.0	1.53	---	6	.09	---	---
Total preharvest						24.72	9.48	6.00
Bind	1-row	1.0	2.20	1.83	38	.84	.70	---
Haul to silo, horses	---	1.0	8.96	9.90	38	3.40	---	3.76
Chop and blow	---	1.0	4.20	2.10	38	1.60	.80	---
Field chop	1-row	1.0	2.36	2.15	35	.83	.75	---
Field chop, contract	1-row	1.0	2.36	2.15	27	.64	.58	---
Haul to silo, truck	$1\frac{1}{2}$-ton	1.0	4.72	2.38	62	2.93	---	---
Blow into silo	---	1.0	1.95	1.58	10	.20	.16	---
Total harvest						10.44	2.99	3.76
Total 1/						35.16	12.47	9.76

1/ In addition, trucks were used an average of 1.48 hours an acre.

CORN FOR SILAGE (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of 13 farms producing corn for silage under irrigation in southeastern Colorado. These farms are located in irrigated valleys of the Colorado portion of type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 879 acres per farm. Cropland comprised about 141 acres. In 1950, 27 acres were in irrigated corn for silage, and the yield averaged slightly more than 13 tons per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 10 to 27; the most common was about 17.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Bu.	0.19	8.50	1.62	100	1.62
Manure	Ton	5 1/	2.00	10.00	20	2.00
Nitrate fertilizer	Cwt.	2.35	4.10	9.64	30	2.89
Phosphate fertilizer	Cwt.	2.35	3.50	8.22	34	2.79
Spray (2,4-D)	Pt.	3.0	.70	2.10	10	.21
Water	Acre	1.0	3.00	3.00	100	3.00
Total materials						12.51

CONTRACT WORK HIRED

Field chopping	Ton	13.3	1.70	22.61	7	1.58
Total contract work						1.58

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting corn silage, irrigated, area II-B2, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	75-bu.	1.0	2.38	2.38	20	0.48	0.48
Fertilize, spreader	5-foot	1.0	.96	.84	10	.10	.08
Plow, moldboard	1-16 inch	1.0	2.45	2.34	76	1.86	1.78
Plow, moldboard	2-14 inch	1.0	1.58	1.51	20	.32	.30
Disk, tandem	6-foot	1.4	.64	.61	76	.68	.65
Disk, single	7-foot	2.7	.48	.46	14	.18	.17
Harrow, spiketooth	15-foot	1.8	.36	.33	30	.20	.18
Roll	5-foot	2.8	.80	.74	10	.22	.21
Level, steel	8-foot	2.1	.66	.63	93	1.29	1.23
Plant	2-row	1.0	.89	.81	100	.89	.81
Harrow, spiketooth	15-foot	1.3	.34	.32	51	.22	.21
Ditch	5-foot	1.0	.12	.11	50	.06	.06
Cultivate, first	2-row	1.0	1.15	1.05	100	1.15	1.05
Cultivate, other	2-row	1.8	.86	.79	100	1.55	1.42
Irrigate	---	2.8	1.07	---	100	3.00	---
Hoe by hand	---	1.0	5.75	---	9	.52	---
Spray	30-foot	1.5	.18	.16	10	.03	.02
Total preharvest						12.75	8.65
Open field, hand	---	1.0	4.12	---	3	.12	---
Field chop	1-row	1.0	2.50	2.39	93	2.32	2.22
Field chop, contract	1-row	1.0	2.50	2.39	7	.18	.17
Haul, truck	1½-ton	1.0	5.12	4.67	98	5.02	---
Total harvest						7.64	2.39
Total 1/						20.39	11.04

1/ In addition, truck use averaged 4.58 hours an acre.

CORN FOR SILAGE (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D1, 1949

The data presented here are based on a survey made in 1950 of approximately 20 farms producing corn for silage under irrigation in 1949 in southeastern Idaho and central Utah. These farms are located in type-of-farming area VI-D1, a general farming area in the irrigated valleys of southeastern Idaho and central Utah. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 195 acres per farm. Cropland comprised about 130 acres. In 1949, approximately 11 acres were in corn for silage, and the yield averaged 16 tons per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 20; the most common was about 14.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.15	17.50	2.62	100	2.62
Manure	Ton	8	1/ 2.00	16.00	60	9.60
Mixed fertilizer	Cwt.	2.00	3.40	6.80	22	1.50
Spray (2,4-D)	Pt.	1.0	.75	.75	32	.24
Binder twine	Lb.	4.0	.35	1.40	17	.24
Water	Acre	1.0	2.40	2.40	100	2.40
Total materials						16.60

CONTRACT WORK HIRED

Spraying	Acre	1.0	3.00	3.00	14	.42
Chopping	Acre	1.0	15.50	15.50	28	4.34
Total contract work						4.76

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting corn for silage, area VI-D1, southeastern Idaho and central Utah, 1949

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	3.94	2.86	54	2.13	1.54	---
Apply manure, horses-sp.	75-bu.	1.0	5.08	6.78	6	.30	---	0.41
Plow, moldboard	2-14 inch	1.0	1.65	1.57	92	1.52	1.44	----
Plow, moldboard	1-16 inch	1.0	2.47	2.35	8	.20	.19	---
Disk, tandem	7-foot	1.3	.86	.82	30	.34	.32	---
Harrow, spiketooth	10-foot	2.2	.59	.54	82	1.07	.98	---
Harrow, spiketooth, h.	10-foot	2.8	1.26	3.35	18	.64	---	1.69
Level	9-foot	1.2	.67	.61	85	.68	.62	---
Level, horses	8-foot	1.0	1.20	3.25	4	.05	---	.13
Plant	2-row	1.0	.89	.81	58	.52	.47	---
Plant, horses	2-row	1.0	.97	1.94	42	.41	---	.81
Cultivate	2-row	2.6	.86	.82	92	2.06	1.96	---
Cultivate, horses	2-row	3.3	1.69	3.38	8	.45	---	.89
List and harrow	---	1.0	.63	.58	36	.23	.21	---
List and harrow, horses	---	1.0	1.10	3.00	19	.21	---	.57
Irrigate	---	4.2	1.71	---	100	7.18	---	---
Spray	22-foot	1.0	.91	.87	18	.16	.16	---
Spray, contract	22-foot	1.0	.91	.87	14	.13	.12	---
Ditch	---	1.9	.95	.51	74	1.33	.72	---
Ditch, horses	---	1.7	1.69	2.02	7	.20	---	.24
Ditch by hand	---	1.0	.84	---	14	.12	---	---
Total preharvest						19.93	8.73	4.74
Bind	1-row	1.0	2.20	1.83	17	.37	.31	---
Haul to silo, truck	$1\frac{1}{2}$-ton	1.0	7.15	2.38	10	.72	---	---
Haul to silo, horses	---	1.0	8.96	9.90	7	.63	---	.69
Chop and blow	---	1.0	4.20	2.10	17	.71	.36	---
Field chop	1-row	1.0	2.36	2.15	55	1.30	1.18	---
Field chop, contract	1-row	1.0	2.36	2.15	28	.66	.60	---
Haul to silo, truck	$1\frac{1}{2}$-ton	1.0	4.72	2.38	83	3.92	---	---
Blow into silo	---	1.0	1.95	1.58	18	.35	.28	---
Total harvest						8.66	2.73	.69
Total 1/						28.59	11.46	5.43

1/ In addition, truck use averaged 2.22 hours an acre.

CORN FOR SILAGE (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, 1952

The data presented here are based on a survey made in 1952 of approximately 35 farms that produced corn for silage under irrigation in 1952 in central Wyoming. These farms are located in type-of-farming area VI-D7, which is comprised of comparatively small irrigated valleys in the Intermountain region. The particular type-of-farming area in which these farms lie is located along Muddy Creek and Wind and Big Horn Rivers in central Wyoming. Much of the farming area is under newly established reclamation projects and many of the farms have been in operation only a few years. General farming prevails in the area.

The farms surveyed averaged about 210 acres per farm. In 1952, approximately 146 acres were in crops, including 13.6 in corn for silage. The average yield of corn silage was about 11.3 tons an acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 27; the most common was about 20.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	12.0	0.20	2.40	100	2.40
Manure	Ton	9	[1]2.00	18.00	26	4.68
Mixed fertilizer (10-20-0)	Cwt.	1.50	4.45	6.68	11	.73
Nitrate fertilizer (33-0-0)	Cwt.	1.00	5.00	5.00	12	.60
Phosphate fertilizer (0-43-0)	Cwt.	1.20	3.90	4.68	22	1.03
Spray (2,4-D)	Pt.	1.0	.75	.75	6	.04
Water	Acre	1.0	2.30	2.30	100	2.30
Total materials						11.78

CONTRACT WORK HIRED

Field chopping	Acre	1.0	10.00	10.00	12	1.20
Total contract work						1.20

[1] Estimated.

Man labor, power, and machinery used by operation in producing and harvesting corn for silage, irrigated, area VI-D7, central Wyoming, 1952

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	4.56	4.56	26	1.19	1.19
Plow, moldboard	2-14 inch	1.0	1.52	1.45	48	.73	.70
Plow, moldboard	2-16 inch	1.0	1.39	1.32	52	.72	.69
Disk, tandem	8-foot	1.7	.48	.46	43	.35	.34
Disk, tandem	10-foot	2.2	.40	.38	44	.39	.37
Harrow	15-foot	2.8	.29	.26	55	.45	.40
Harrow	20-foot	2.9	.23	.21	43	.29	.26
Level	9-foot	1.7	.47	.45	42	.34	.32
Level	12-foot	2.1	.40	.38	46	.39	.37
Plant	2-row	1.0	.80	.74	66	.53	.49
Plant	4-row	1.0	.45	.41	34	.15	.14
Ditch	---	1.4	.43	.40	45	.27	.25
Cultivate	2-row	2.5	.92	.84	66	1.52	1.39
Cultivate	4-row	2.5	.52	.47	34	.44	.40
Irrigate	---	3.6	4.65	---	100	16.74	---
Cultivate	10-foot	1.3	.44	.40	11	.06	.06
Spray	24-foot	1.0	.31	.29	6	.02	.02
Total preharvest						24.58	7.39
Field chop	1-row	1.0	1.92	1.60	88	1.69	1.41
Field chop, contract	1-row	1.0	1.92	1.60	12	.23	.19
Haul, truck	$1\frac{1}{2}$-ton	1.0	3.23	2.79	100	3.23	---
Put into pit	---	1.0	2.53	1.78	90	2.28	1.60
Total harvest						7.43	3.20
Total 1/						32.01	10.59

1/ In addition, truck use averaged 2.79 hours an acre.

CORN FOR SILAGE (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F1, 1951

The data presented here are based on a survey made in 1951 of approximately 30 farms producing corn for silage under irrigation in 1951 in north central Wyoming and south central Montana. These farms are located in type-of-farming area IX-F1, a general farming and specialized cropping area in the irrigated valleys along the Big Horn, Shoshone, and Yellowstone Rivers in Montana and Wyoming. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 227 acres per farm. Cropland comprised about 158 acres. In 1951, approximately 20 acres were in corn for silage, and the yield averaged about 10 tons per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 27. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	0.17	13.75	2.34	100	2.34
Manure	Ton	10	1/ 2.00	20.00	17	3.40
Phosphate fertilizer (0-33-0)	Cwt.	1.00	3.60	3.60	31	1.12
Spray (2,4-D)	Pt.	1.5	.56	.84	17	.14
Water	Acre	1.0	2.00	2.00	100	2.00
Total materials						8.06

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Field chopping	Acre	1.0	8.00	8.00	10	.80
Total contract work						.80

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting corn for silage, irrigated, area IX-F1, north central Wyoming and south central Montana, 1951

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	80-bu.	1.0	5.94	5.50	17	1.01	0.94
Plow, moldboard	2-16 inch	1.0	1.26	1.21	58	.73	.70
Plow, moldboard	2-14 inch	1.0	1.50	1.43	42	.63	.60
Disk, tandem	8-foot	1.9	.58	.52	67	.74	.66
Harrow, springtooth	9-foot	1.0	.55	.50	25	.14	.12
Harrow, spiketooth	15-foot	2.4	.30	.27	100	.72	.65
Level	10-foot	1.9	.44	.42	94	.79	.75
Plant	2-row	1.0	.92	.84	31	.29	.26
Plant	4-row	1.0	.49	.45	69	.34	.31
Harrow, spiketooth	15-foot	1.4	.28	.25	50	.20	.18
Cultivate	2-row	2.6	.75	.68	56	1.09	.99
Cultivate	4-row	3.4	.58	.52	44	.87	.78
Ditch	---	1.0	.28	.25	91	.25	.23
Ditch by hand	---	1.0	.47	---	15	.07	---
Irrigate	---	3.2	3.54	---	100	11.33	---
Spray	6-row	1.0	.39	.36	17	.07	.06
Total preharvest						19.27	7.23
Field chop	1-row	1.0	2.24	1.82	90	2.02	1.64
Field chop, contract	1-row	1.0	2.24	1.82	10	.22	.18
Haul to silo, truck	1½-ton	1.0	3.84	3.52	100	3.84	---
Fill silo	---	1.0	2.32	1.61	100	2.32	1.61
Total harvest						8.40	3.43
Total 1/						27.67	10.66

1/ In addition, truck use averaged 3.52 hours an acre.

COTTON (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VII-K1, 1949

The data presented here are based on a survey made in 1950 of 46 farms producing irrigated cotton. These farms are located in type-of-farming area VII-K1, an irrigated cotton and alfalfa area comprised of Pima, Pinal, and Graham counties in southern Arizona.

The farms surveyed averaged about 549 acres per farm. Cropland comprised about 422 acres. In 1949, 313 acres were in irrigated cotton, and the yield averaged 700 pounds of lint and 0.53 ton of cottonseed per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 14 to 65; the most common was about 28.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	23.5	0.10	2.35	100	2.35
Manure	Ton	6	1/2.00	12.00	4	.48
Mixed fertilizer	Cwt.	2.80	3.55	9.94	16	1.59
Nitrate fertilizer (NH_3)	Cwt.	.85	11.70	9.94	18	1.79
Gypsum	Ton	1.1	10.85	11.94	3	.36
Dust (Benzene hexachloride)	Lb.	28.5	.12	3.42	52	1.78
Dust, sulphur and DDT	Lb.	34.0	.09	3.06	75	2.30
Water	Acre	1.0	15.95	15.95	100	15.95
Total materials						26.60
CONTRACT WORK HIRED						
Plowing	Acre	1.0	3.40	3.40	26	.88
Disking	Acre	1.0	2.30	2.30	4	.09
Leveling	Acre	1.0	1.55	1.55	24	.37
Thinning	Acre	1.0	2.30	2.30	100	2.30
Hoeing	Acre	2/3.3	2.15	7.10	100	7.10
Dusting	Acre	2/1.8	.90	1.62	83	1.34
Picking by hand	Cwt.	19.4	2.80	54.32	93	50.52
Picking by machine	Cwt.	18.8	2.00	37.60	2	.75
Total contract work						63.35

1/ Estimated. 2/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting cotton, irrigated, area VII-K1 southern Arizona, 1949

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	9.01	2.83	4	0.36	0.11
Cut stalks, cutter	2-row	1.0	.40	.38	92	.37	.35
Plow, moldboard	1-18 inch	1.0	2.09	1.99	6	.13	.12
Plow, disk	3-disk	1.0	1.31	1.25	17	.22	.21
Plow, disk	5-disk	1.0	.90	.86	46	.41	.40
Plow, disk, contract	7-disk	1.0	.62	.59	26	.16	.15
Subsoil	3-prong	1.0	.95	.90	9	.09	.08
Level	8-foot	1.3	.42	.40	29	.16	.15
Level	12-foot	1.2	.32	.30	37	.14	.13
Level, contract	12-foot	1.0	.32	.30	24	.08	.07
List	4-row	1.0	.43	.41	99	.43	.41
Shovel row ends	---	1.0	.29	---	11	.03	---
Irrigate	---	1.0	2.28	---	100	2.28	---
Disk, tandem	7-foot	1.3	.41	.39	68	.36	.35
Disk, tandem, contract	7-foot	1.0	.41	.39	4	.02	.02
Harrow, spiketooth	15-foot	2.3	.23	.21	38	.20	.18
Harrow, spiketooth	20-foot	2.2	.18	.17	29	.12	.11
Plant	4-row	1.0	.37	.34	100	.37	.34
Harrow, spiketooth	20-foot	1.0	.23	.21	48	.11	.10
Seed	4-row	1.0	.23	.21	14	.03	.03
Cultivate, first	4-row	1.0	.49	.45	91	.45	.41
Cultivate, first	2-row	1.0	.83	.76	9	.07	.07
Cultivate, other	4-row	7.9	.33	.30	91	2.38	2.16
Cultivate, other	2-row	7.0	.59	.54	9	.37	.34
Irrigate	---	5.8	1.77	---	100	10.27	---
Thin by hand, contract	---	1.0	5.55	---	100	5.55	---
Hoe by hand, contract	---	3.3	4.35	---	100	14.36	---
Side dress	4-row	1.0	.46	.40	10	.05	.04
Clean ditches, hand	---	3.0	3.13	---	11	1.03	---
Clean ditches	5-foot	3.8	.21	.09	15	.12	.05
Dust	8-row	1.5	.16	.09	19	.05	.03
Dust, plane, contract	---	1.8	---	---	83	---	---
Total preharvest						40.77	6.41
Pick by hand, 1st, c.	---	1.0	36.87	---	93	34.29	
Pick by hand, 2nd, c.	---	1.0	24.01	---	93	22.33	---
Pick by machine	---	1.0	1.47	1.36	5	.07	.07
Pick by machine, c.	---	1.0	1.47	1.36	2	.03	.03
Haul, truck	3/4-ton	1.0	1.05	.96	100	1.05	---
Total harvest						57.77	.10
Total 1/						98.54	6.51

1/ In addition, truck use averaged 0.96 hour an acre.

Note: c = operation performed on contract basis.

FLAX: RESOURCES USED IN PRODUCTION, AREA III-C2, 1950

The data presented here are based on a survey made in 1951 of 23 farms producing flax. These farms are located in type-of-farming area III-C2, a wheat and range-livestock area in northeastern Montana and southwestern North Dakota.

The farms surveyed averaged 1,601 acres per farm. Cropland comprised about 889 acres. In 1950, 75 acres were in flax, and the yield averaged about 5 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 14 to 37; the most common was about 26.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	0.4	3.90	1.56	87	1.36
Purchased seed	Bu.	.4	4.00	1.60	13	.21
Total materials						1.57

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	3.00	3.00	4	.12
Total contract work						.12

Man labor, power, and machinery used by operation in producing and harvesting flax, area III-C2, northeastern Montana and southwestern North Dakota, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	4-14 inch	1.0	0.63	0.55	61	0.38	0.34
Disk, tandem	10-foot	1.7	.23	.22	48	.19	.18
Harrow, spiketooth	25-foot	1.7	.12	.12	25	.05	.05
Cultipack	10-foot	1.0	.24	.23	10	.02	.02
Seed, drill	12-foot	1.0	.22	.20	57	.13	.11
Drill and cultipack	10-foot	1.0	.26	.24	23	.06	.06
Plow, pack and pony drill	5-foot	1.0	.77	.70	20	.15	.14
Harrow, spiketooth	25-foot	1.0	.12	.12	10	.01	.01
Total preharvest						.99	.91
Windrow	14-foot	1.0	.23	.22	38	.09	.08
Combine	12-foot	1.0	.36	.30	96	.35	.29
Combine, contract	12-foot	1.0	.36	.30	4	.01	.01
Haul grain, truck	---	1.0	.32	.16	100	.32	---
Total harvest						.77	.38
Total 1/						1.76	1.29

1/ In addition, truck use averaged 0.16 hour an acre.

GRAIN SORGHUM (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of 23 farms producing grain sorghum under irrigation. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in southeastern Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms surveyed averaged about 472 acres per farm. Cropland comprised about 267 acres. In 1950, 38 acres were in grain sorghum, and the yield averaged about 45 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 13 to 34; the most common was about 20.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed 1/	Bu.	0.3	3.20	0.96	100	0.96
Ceresan	Bu.	.3	.09	.03	24	.01
Water	Acre	1.0	2.10	2.10	100	2.10
Total materials						3.07

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying, airplane 2/	Acre	1.0	2.50	2.50	2	.05
Combining	Acre	1.0	4.30	4.30	23	.99
Hauling	Bu.	45	.05	2.25	12	.27
Total contract work						1.31

1/ Approximately 14 percent of the farmers in this area used home-grown seed.

2/ Cost includes spray materials.

Man labor, power, and machinery used by operation in producing and harvesting grain sorghum, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over Man	 Power	Acreage covered	Average time per acre - all farms Man	 Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-14 inch	1.0	1.29	1.23	88	1.14	1.08
Disk, tandem	8-foot	1.7	.52	.49	33	.29	.27
Disk, single	12-foot	1.7	.38	.37	33	.21	.21
Chisel	8-foot	1.8	.57	.55	15	.15	.15
Harrow, spiketooth	15-foot	1.8	.24	.22	82	.35	.33
Harrow, springtooth	10-foot	1.0	.53	.48	16	.08	.08
List	2-row	1.0	.52	.47	9	.05	.04
Level, wooden	10-foot	2.4	.45	.43	14	.15	.14
Level	12-foot	2.4	.42	.40	53	.54	.51
Drill	10-foot	1.0	.51	.46	11	.06	.05
Plant, lister	2-row	1.0	.58	.52	89	.52	.46
Harrow, spiketooth	15-foot	1.3	.22	.20	75	.22	.20
Ditch	6-foot	1.0	.10	.09	42	.04	.04
Corrugate	13-foot	1.0	.24	.22	19	.05	.04
Irrigate	---	2.4	1.55	---	100	3.72	---
Cultivate	2-row	2.4	.69	.63	89	1.48	1.34
Spray, contract	---	1.0	---	---	2	---	---
Total preharvest						9.05	4.94
Combine	6-foot	1.0	1.14	1.05	49	.56	.51
Combine, self-propelled	12-foot	1.0	.59	.54	28	.17	---
Combine, s.p., contract	12-foot	1.0	.59	.54	23	.14	---
Haul from combine	---	1.0	.48	.44	12	.06	.05
Haul from combine, truck	---	1.0	.46	.43	76	.35	---
Haul, truck, contract	---	1.0	.71	.66	12	.09	---
Total harvest						1.37	.56
Total 1/						10.42	5.50

1/ In addition, self-propelled combine use averaged 0.28 hour an acre and truck use 0.41 hour an acre.

GRAIN SORGHUM: RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of approximately 40 farms producing grain sorghum for grain in southeastern Colorado and northeastern New Mexico. These farms are located in type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 1,240 acres per farm. Cropland comprised about 725 acres. In 1950, 235 acres were planted to grain sorghum. Because 1950 was a dry year, only about 65 percent of the acreage was harvested. The yield of 11 bushels per harvested acre also was considerably below the usual yield of approximately 17 bushels.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 9 to 36; the most common was about 24.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 1/	Bu.	0.1	2.85	0.28	100	0.28
Ceresan	Bu.	.1	.12	.01	32	.01
Spray (2,4-D)	Pt.	.3	.70	.21	24	.05
Twine, binder	Lb.	2.4	.30	.72	11	.08
Total materials						.42

CONTRACT WORK HIRED

Threshing	Bu.	11	.09	.99	2	.02
Combining, s.p.	Acre	1.0	2.83	2.83	19	.54
Hauling	Bu.	11	.09	99	11	.11
Total contract work						.67

1/ Approximately 82 percent of the farmers in this area purchased grain sorghum seed.

Man labor, power, and machinery used by operation in producing and harvesting grain sorghum, area II-B2, southeastern Colorado and northeastern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Cut stalks	3-row	1.0	0.33	0.32	3	0.01	0.01
Plow, moldboard	4-12 inch	1.0	.50	.47	10	.05	.05
Plow, one-way	10-foot	1.7	.32	.30	31	.17	.16
Plow, one-way	15-foot	2.4	.18	.17	33	.14	.14
Plow, Graham	10-foot	1.2	.35	.34	23	.10	.09
Plow, Graham	16-foot	1.0	.20	.19	35	.07	.07
List	2-row	1.0	.51	.46	10	.05	.05
List	4-row	1.0	.24	.22	25	.06	.06
Plant, lister	2-row	1.0	.52	.47	14	.07	.07
Plant, lister	3-row	1.0	.34	.32	19	.06	.06
Plant, lister	4-row	1.0	.22	.20	45	.10	.09
Drill	14-foot	1.0	.30	.27	22	.07	.06
Cultivate, knife-sled	2-row	1.0	.40	.37	16	.06	.06
Cultivate, knife-sled	3-row	1.0	.26	.24	9	.02	.02
Cultivate, knife-sled	4-row	1.0	.15	.14	29	.04	.04
Harrow, spiketooth	20-foot	1.1	.14	.13	53	.08	.07
Cultivate	2-row	1.2	.47	.43	16	.09	.08
Cultivate	3-row	1.1	.30	.27	16	.05	.05
Cultivate	4-row	1.3	.22	.20	32	.09	.08
Spray	24-foot	1.0	.19	.17	24	.05	.04
Total preharvest						1.43	1.35
Bind	10-foot	1.0	.60	.37	1/11	.07	.04
Shock by hand	---	1.0	1.17	---	1/11	.13	---
Haul bundles	---	1.0	2.30	1.06	1/ 7	.16	.07
Thresh	26-inch	1.0	.28	.25	1/ 5	.01	.01
Thresh, contract	26-inch	1.0	.28	.25	1/ 2	.01	.01
Haul grain, truck	---	1.0	.44	.40	1/ 7	.03	---
Combine	6-foot	1.0	.78	.56	1/21	.16	.12
Combine	12-foot	1.0	.34	.31	1/47	.16	.15
Combine	16-foot	1.0	.25	.23	1/ 6	.02	.01
Combine, s.p., contract	14-foot	1.0	.30	.30	1/19	.06	---
Haul grain, truck	1½-ton	1.0	.25	.23	1/73	.18	---
Haul, truck, contract	1½-ton	1.0	.10	.09	1/11	.01	---
Total harvest						1.00	.41
Total 2/						2.43	1.76

1/ Harvested acreage only. Because of a severe drought, only 65 percent of the planted acreage was harvested.

2/ In addition, truck use averaged 0.21 hour an acre and self-propelled combines 0.06 hour an acre.

HOPS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A1, 1949

The data presented here are based on a survey made in 1950 of 20 farms producing hops under irrigation. These farms are located in type-of-farming area I-A1, a fruit and mixed-farming area in the Yakima River Valley of central Washington.

The farms surveyed averaged about 80 acres per farm. Cropland comprised about 69 acres. In 1949, 46 acres were in hops, and the yield averaged approximately 1,760 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 11 to 19; the most common was about 14.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Plants	No.	160	0.02	3.20	40	1.28
Austrian peas	Lb.	98	.10	9.80	12	1.18
Vetch	Lb.	22	.25	5.50	24	1.32
Manure	Ton	12	[1]4.00	48.00	71	34.08
Mixed fertilizer (16-20-0)	Cwt.	2.90	3.70	10.73	62	6.65
Phosphate fertilizer (0-20-0)	Cwt.	3.00	3.00	9.00	17	1.53
Nitrate fertilizer	Cwt.	1.10	3.85	4.24	25	1.06
Stakes	No.	340	.01	3.40	100	3.40
String	Lb.	167	.20	33.40	100	33.40
Insecticide [2]	Acre	[3] 1.7	5.30	9.01	99	8.92
Water	Acre	1.0	5.10	5.10	100	5.10
Fuel oil	Gal.	110	.08	8.80	43	3.78
Propane	Gal.	140	.16	22.40	8	1.79
Coal	Ton	.8	16.00	12.80	18	2.30
Wood	Cord	.9	7.25	6.52	15	.98
Burlap	Yard	45	.42	18.90	100	18.90
Total materials						125.67

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Dusting or spraying, plane	Acre	[3]1.3	2.90	3.77	58	2.19
Shredding vines	Acre	1.0	4.25	4.25	10	.42
Picking by hand	Lb.	[4]7040	.03	211.20	3	6.34
Machine picking	Bale	8.8	3.25	28.60	28	8.01
Baling	Bale	8.8	1.00	8.80	100	8.80
Picking, hauling & drying	Bale	8.8	41.00	360.80	16	57.73
Total contract work						83.49

[1] Includes cost of delivery. [2] Applied mostly as vapors or fogs.
[3] One acre times average number of times over. [4] Green weight.

Man labor, power, and machinery used by operation in producing and harvesting hops, irrigated, area I-A1, central Washington, 1949

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	6.51	1.94	25	1.63	0.48
Apply manure, loader-sp.	---	1.0	3.93	3.54	46	1.81	1.63
Fertilize, distributor	5-foot	1.0	1.26	.94	54	.68	.51
Plow, moldboard	2-14 inch	1.0	.95	.90	46	.44	.41
Plow, disk	2-disk	1.0	1.22	1.17	23	.28	.27
Disk, tandem	5-foot	5.7	.65	.62	79	2.92	2.79
Restake, truck	---	1.0	6.85	1.06	100	6.85	---
Repair trellis, truck	---	1.0	4.06	1.12	47	1.91	---
Replant, by hand	---	1.0	3.39	---	67	2.27	---
Prune & replant by hand	---	1.0	24.77	---	32	7.93	---
Prune by hand	---	1.0	19.73	---	67	13.22	---
String, sled	---	1.0	13.90	1.57	100	13.90	1.57
Train, 1st, hand	---	1.0	29.41	---	100	29.41	---
Train, 2nd, hand	---	1.0	22.73	---	100	22.73	---
Train, 3rd, hand	---	1.0	19.52	---	100	19.52	---
Bob, sucker, hoe & train	---	1.5	19.06	---	99	28.30	---
Arch, hand	---	1.0	8.17	---	64	5.23	---
Put up heads	---	2.3	5.19	1.34	38	4.54	1.17
Cultivate	1-row	8.6	.72	.66	94	5.82	5.34
Ditch	1-row	3.8	.64	.58	100	2.43	2.20
Irrigate	---	5.7	.99	---	100	5.64	---
Drill cover crop	5-foot	1.0	.71	.65	36	.26	.23
Dust or spray	2-row	1.7	.66	.42	53	.59	.38
Dust or spray, plane, c.	---	1.3	---	---	58	---	---
Shred vines	---	1.0	.28	.25	6	.02	.02
Shred vines, contract	---	1.0	.28	.25	10	.03	.02
Spread vines, sprdr.	---	1.0	10.99	4.33	13	1.43	.56
Total preharvest						179.79	17.58
Pick, portable, contract	---	1.0	91.87	7.92	28	25.72	2.22
Haul to dryer, truck	---	1.0	20.70	5.25	28	5.80	---
Haul to picker, truck	---	1.0	27.94	12.91	53	14.81	---
Pick, stationary	---	1.0	110.63	---	53	58.63	---
Hand pick, contract	---	1.0	---	---	3	---	---
Haul to dryer, truck	---	1.0	10.69	2.41	3	.32	---
Dry	---	1.0	17.09	---	84	14.36	---
Pick, haul & dry, contract	---	1.0	138.57	12.91	16	22.17	---
Bale, contract	---	1.0	---	---	100	---	---
Total harvest 1/						141.81	2.22
Total 2/						321.60	19.80

1/ Excludes picking and baling done on a contract basis for which no rates were available. 2/ In addition, truck use averaged 10.45 hours an acre.

LADINO CLOVER SEED (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, OREGON, 1950

The data presented here are based on a survey made in 1951 of approximately 20 farms producing ladino clover seed under irrigation in central Oregon. These farms are located in type-of-farming area VI-D7, an area composed of irrigated valleys scattered throughout the western Mountain region. Livestock and specialized irrigated crops are the most important enterprises in these valleys.

Nearly all of the ladino clover in this area is seeded alone. As most of the seedings in this area were recently established, farmers were unable to report on the usual life of the stand. However, many were of the opinion that the stands would last at least 6 years. As a result, a sixth of the man labor, power and machinery, and materials used in establishing the seeding is charged annually to the seed crop.

The farms surveyed averaged about 127 acres per farm. Cropland comprised about 98 acres. In 1950, 45 acres were in ladino clover seed, and the yield averaged 254 pounds per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 29; the most common was about 18.

Materials used and contract work hired, ladino clover seed (irrigated), area VI-D7, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Establish seeding, total:						
Seed	Lb.	3.3	1.50	4.95	100	4.95
Seed treating	Lb.	3.3	.01	.03	16	.01
Nitrate fertilizer (21-0-0)	Cwt.	1.40	3.80	5.32	37	1.97
Gypsum - sulphur	Cwt.	2.50	2.25	5.62	45	2.53
Water	Acre	1.0	3.50	3.50	100	3.50
Total for establishment						12.96
Annual charge to clover seed:						2.16
Nitrate fertilizer (21-0-0)	Cwt.	1.0	3.80	3.80	4	.15
Phosphate fertilizer(0-18-0)	Cwt.	2.0	1.90	3.80	9	.34
Gypsum - sulphur	Cwt.	1.1	2.25	2.48	78	1.93
Spray (60% toxaphene)	Pt.	2.8	.70	1.96	68	1.33
Dust (10% toxaphene)	Lb.	20	.12	2.40	53	1.27
Dust (DDT)	Lb.	25	.10	2.50	17	.42
Water	Acre	1.0	3.50	3.50	100	3.50
Total annual charge						11.10

CONTRACT WORK HIRED

Beehive rental	Hive	1.0	7.00	7.00	100	7.00
Seed certification	Acre	1.0	.75	.75	100	.75
Spraying	Acre	1/ 1.2	1.40	1.68	25	.42
Dusting, airplane	Acre	1/ 1.1	1.45	1.60	68	1.09
Combining	Acre	1.0	25.00	25.00	7	1.75
Threshing	Acre	1.0	20.00	20.00	18	3.60
Total contract work						14.61

1/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting ladino clover seed, area VI-D7, central Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Establish seeding, Total clover	---	---	---	---	---	6.05	4.04
Annual	---	---	---	---	1/	1.01	.67
Rake, side-delivery	10-foot	1.0	0.82	0.75	33	.27	.25
Haul rocks	---	1.0	.29	.26	20	.06	.05
Fertilize, spreader	10-foot	1.0	.48	.42	82	.39	.34
Disk, tandem	8-foot	1.0	.56	.54	5	.03	.03
Harrow, spiketooth	12-foot	1.0	.33	.30	5	.02	.02
Ditch	6-foot	1.0	.24	.22	20	.05	.04
Ditch by hand	---	1.0	.43	---	10	.04	---
Corrugate	10-foot	1.0	.41	.38	55	.23	.21
Irrigate	---	4.3	.47	---	100	2.02	---
Spray	20-foot	1.0	.36	.34	56	.20	.19
Spray, contract	---	1.2	.36	.34	25	.11	.05
Dust, plane, contract	---	1.0	---	---	68	---	---
Clip, mower	7-foot	1.0	.41	.38	44	.18	.17
Total preharvest						4.61	2.02
Mow and swath	5-foot	1.0	1.66	1.51	57	.95	.86
Combine	6-foot	1.0	4.38	4.02	30	1.31	1.21
Combine, self-propelled	10-foot	1.0	3.15	2.42	63	1.98	---
Combine, contract	6-foot	1.0	4.38	4.02	7	.31	.28
Haul and stack	---	1.0	3.91	3.00	66	2.58	1.98
Thresh (re-run)	---	1.0	3.50	1.78	48	1.68	.85
Thresh, contract	---	1.0	1.20	1.10	18	.22	.20
Vacuum	---	1.0	2.30	2.10	18	.41	.38
Thresh, vacuumings	---	1.0	1.80	1.65	18	.32	.30
Haul, truck	3/4-ton	1.0	.23	.21	55	.13	---
Total harvest						9.89	6.06
Total 2/						14.50	8.08

1/ In this area approximately 100 percent of the farms were seeded without a nurse crop and the average life of the crop was 6 years.

2/ Self-propelled combines averaged 1.52 hours an acre and truck use averaged 0.12 hour an acre.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A1, 1949

The data presented here are based on a survey made in 1950 of 35 farms producing irrigated oats. These farms are located in type-of-farming area I-A1, a fruit and mixed-farming area in the Yakima River Valley of central Washington.

The farms surveyed averaged about 196 acres per farm. Cropland comprised about 152 acres. In 1949, 22 acres were in irrigated oats, and the yield averaged approximately 82 bushels per acre.

Tractors and motorized equipment provided most of the power used on these farms, although horses were used for hauling bundles on some farms where oats were threshed. The drawbar-horsepower rating of the tractors ranged from 11 to 62; the most common was about 20.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	3.4	1.05	3.57	50	1.78
Purchased seed	Bu.	3.4	1.25	4.25	50	2.12
Clean and treat seed	Bu.	3.4	.08	.27	30	.08
Manure	Ton	7	1/ 2.00	14.00	8	1.12
Mixed fertilizer	Cwt.	1.50	3.75	5.62	7	.39
Nitrate fertilizer (21-0-0)	Cwt.	1.00	3.90	3.90	2	.08
Phosphate fertilizer(0-18-0)	Cwt.	3.85	1.80	6.93	7	.49
Sulphur	Cwt.	2.20	2.25	4.95	3	.15
Binder twine	Lb.	4.0	.30	1.20	60	.72
Sacks, replacement	No.	29	.17	4.93	21	1.04
Sack strings	No.	29	.01	.29	25	.07
Water	Acre	1.0	4.75	4.75	100	4.75
Total materials						12.79

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying 2/	Acre	1.0	2.50	2.50	12	.30
Binding	Acre	1.0	4.50	4.50	21	.94
Shocking	Acre	1.0	2.50	2.50	20	.50
Threshing	Bu.	82	.12	9.84	57	5.61
Combining, bulk	Acre	1.0	10.00	10.00	8	.80
Hauling, truck	Bu.	82	.03	2.46	11	.27
Total contract work						8.42

1/ Estimated.

2/ Cost includes spray materials.

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area I-A1, central Washington, 1949

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	4.73	1.49	5	0.24	0.07
Apply manure, loader-sp.	---	1.0	3.49	3.49	3	.10	.10
Plow, moldboard	2-16 inch	1.0	1.21	1.15	73	.88	.84
Plow, moldboard	1-16 inch	1.0	2.25	2.15	27	.61	.58
Disk, tandem	7-foot	1.6	.68	.65	47	.51	.49
Disk, tandem	5-foot	1.4	.89	.85	9	.11	.11
Fertilize, spreader	8-foot	1.0	.85	.63	11	.09	.07
Harrow, springtooth	8-foot	2.0	.62	.57	25	.31	.28
Harrow, spiketooth	15-foot	2.2	.30	.27	77	.51	.45
Harrow, spiketooth	20-foot	2.2	.22	.20	22	.11	.10
Float, wooden	8-foot	1.0	.64	.61	31	.20	.19
Level, steel	9-foot	1.0	.44	.42	20	.09	.08
Cultipack	10-foot	1.3	.34	.31	21	.09	.08
Seed, drill	8-foot	1.0	.63	.58	65	.41	.38
Seed, drill	10-foot	1.0	.53	.48	35	.19	.17
Harrow, spiketooth	15-foot	1.2	.47	.43	13	.07	.07
Cultipack	10-foot	1.2	.44	.40	27	.14	.13
Spray, contract	---	1.0	---	---	12	---	---
Ditch	3-row	1.0	.58	.53	100	.58	.53
Irrigate	---	2.5	.86	---	100	2.15	---
Total preharvest 1/						7.39	4.72
Bind	8-foot	1.0	1.66	.86	60	1.00	.52
Bind, contract	8-foot	1.0	1.66	.86	21	.35	.18
Shock by hand	---	1.0	1.97	---	57	1.12	---
Shock by hand, contract	---	1.0	1.97	---	20	.39	---
Haul bundles	---	1.0	4.17	1.74	53	2.21	.92
Haul bundles, horses	---	1.0	4.92	6.53	28	1.38	---
Thresh	---	1.0	2.16	.63	24	.52	.15
Thresh, contract	---	1.0	2.16	.63	57	1.23	.36
Swath	8-foot	1.0	.57	.52	9	.05	.05
Combine, s.p., bulk	7-foot	1.0	1.21	1.12	11	.13	---
Combine, s.p., bulk, c.	7-foot	1.0	1.21	1.12	8	.10	---
Haul, bulk, truck	---	1.0	.48	.44	55	.26	---
Haul, sacked, truck	---	1.0	.94	.43	4	.04	---
Haul, sacked, truck, c.	---	1.0	.94	.43	11	.10	---
Total harvest						8.88	2.18
Total 2/						16.27	6.90

1/ Excludes spraying done on a contract basis for which no rates were available.

2/ In addition, horse work averaged 1.83 hours an acre, self-propelled combine, 0.21 hour an acre and truck use 0.31 hour an acre.

Note: c. = operation performed on contract basis.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A5, 1952

The data presented here are based on a survey made in 1952 of approximately 45 farms producing oats under irrigation in 1952 in west central Colorado. These farms are located in type-of-farming area I-A5, which is comprised of comparatively small irrigated valleys at the foot of the Rocky Mountains in west central Colorado. Fruit and mixed farming predominates in this area. The farms are comparatively small units but are intensively operated.

The farms surveyed averaged about 105 acres per farm. In 1952, 91 acres were in crops, including 11 acres in oats. The average yield of oats was about 58 bushels an acre. Most farmers in this area grow small grains in their rotations partly as a supplement to their feeding operations and partly as a nurse crop for new seedings of alfalfa.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 27. Those with drawbar-horsepower ratings of 19 and 26 were most common.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Cwt.	1.10	5.20	5.72	100	5.72
Manure	Ton	9	[1]2.00	18.00	16	2.88
Mixed fertilizer (10-20-0)	Cwt.	2.00	4.05	8.10	9	.73
Nitrate fertilizer(33-0-0)	Cwt.	1.00	4.00	4.80	12	.58
Phosphate fertilizer(0-43-0)	Cwt.	1.50	3.75	5.62	32	1.80
Spray (2,4-D)	Pt.	1.0	.65	.65	3	.02
Water	Acre	1.0	2.50	2.50	100	2.50
Twine, binder	Lb.	4.0	.35	1.40	29	.41
Total materials						14.64

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Threshing	Bu.	58	.08	4.64	14	.65
Combining	Acre	1.0	7.50	7.50	27	2.02
Total contract work						2.67

[1] Estimated.

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area I-A5, west central Colorado, 1952

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	4.62	4.62	16	0.74	0.74
Plow, moldboard	1-16 inch	1.0	2.10	2.01	35	.74	.70
Plow, moldboard	2-14 inch	1.0	1.50	1.43	33	.50	.47
Disk, tandem	8-foot	1.9	.58	.56	91	1.00	.96
Harrow	10-foot	2.0	.44	.40	65	.57	.52
Fertilize	8-foot	1.0	.53	.46	48	.25	.22
Level	8-foot	1.7	.70	.67	85	1.01	.97
Seed, drill	8-foot	1.0	.62	.57	71	.44	.40
Seed, drill	12-foot	1.0	.43	.39	29	.12	.11
Ditch	---	1.0	.31	.29	60	.19	.17
Corrugate	8-foot	1.0	.52	.47	77	.40	.36
Spray	16-foot	1.0	.65	.60	3	.02	.02
Irrigate	---	4.1	4.15	---	100	17.02	---
Total preharvest						23.00	5.64
Windrow	7-foot	1.0	.66	.60	5	.03	.03
Bind	10-foot	1.0	1.05	.85	29	.30	.25
Shock	---	1.0	2.13	---	25	.53	---
Haul to thresher	---	1.0	5.12	2.42	29	1.48	.70
Thresh	---	1.0	1.62	.73	15	.24	.11
Thresh, contract	---	1.0	1.62	.73	14	.23	.10
Combine	6-foot	1.0	1.50	1.25	44	.66	.55
Combine, contract	6-foot	1.0	1.36	1.25	27	.37	.34
Haul grain, truck	1½-ton	1.0	1.17	1.07	85	.99	---
Total harvest						4.83	2.08
Total 1/						27.83	7.72

1/ In addition, truck use averaged 0.91 hour an acre.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-A3, 1950

The data presented here are based on a survey made in 1950 of approximately 45 farms producing oats under irrigation in 1950 in east central Utah. These farms are located in the irrigated valleys along the Colorado, Strawberry, and Green Rivers in Utah. These valleys comprise comparatively small portions of type-of-farming area II-A3, a seasonal migratory grazing area. The particular farms surveyed are for the most part general farms, producing livestock, corn, and small grains. Some of the farmers operate additional grazing or nonirrigated units in connection with their irrigated land.

The farms surveyed averaged about 182 acres per farm. Cropland comprised about 117 acres. In 1950, approximately 11 acres were in oats, and the yield averaged 56 bushels per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 25; the most common was about 15.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.10	4.00	4.40	100	4.40
Manure	Ton	8	1/2.00	16.00	11	1.76
Phosphate fertilizer	Cwt.	1.75	3.20	5.60	9	.50
Binder twine	Lb.	3.8	.30	1.14	51	.58
Sacks	No.	6	.30	1.80	42	.76
Sack twine	Lb.	.5	.95	.48	27	.13
Water	Acre	1.0	1.75	1.75	100	1.75
Total materials						9.88

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	1.10	.25	.28	65	.18
Combining	Acre	1.0	6.00	6.00	36	2.16
Binding	Acre	1.0	3.25	3.25	20	.65
Threshing	Bu.	56	.12	6.72	51	3.43
Hauling	Bu.	56	.05	2.80	2	.06
Total contract work						6.48

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area II-A3, east central Utah, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	3.05	2.51	9	0.27	0.23	---
Apply manure, horses-sp.	60-bu.	1.0	9.32	10.05	2	.19	---	0.20
Plow, moldboard	2-16 inch	1.0	1.46	1.39	20	.29	.28	---
Plow, moldboard	2-14 inch	1.0	1.60	1.52	48	.77	.73	---
Plow, moldboard	1-16 inch	1.0	2.47	2.35	28	.69	.66	---
Plow, moldboard, horses	1-16 inch	1.0	6.18	16.30	4	.25	---	.65
Disk, tandem	7-foot	1.5	.79	.76	60	.71	.68	---
Fertilize, spreader	10-foot	1.0	.85	.55	9	.08	.05	---
Harrow, spiketooth	10-foot	1.9	.56	.51	70	.74	.68	---
Harrow, spiketooth, h.	10-foot	2.4	1.22	3.39	8	.23	---	.65
Level	8-foot	1.2	.68	.65	57	.47	.44	---
Level, horses	8-foot	1.2	1.40	3.50	7	.12	---	.29
Seed, drill	8-foot	1.0	.62	.55	80	.50	.44	---
Seed, drill, horses	8-foot	1.0	1.09	2.00	17	.19	---	.34
Seed by hand	---	1.0	.90	---	3	.03	---	---
Harrow, spiketooth, h.	10-foot	1.8	1.22	3.39	3	.06	---	.18
Irrigate	---	2.7	2.44	---	100	6.59	---	---
Ditch	---	1.0	1.07	.92	88	.94	.81	---
Ditch, horses	---	1.0	1.81	1.66	12	.22	---	.20
Ditch by hand	---	1.0	.85	---	30	.26	---	---
Total preharvest						13.60	5.00	2.51
Combine	6-foot	1.0	2.02	1.25	13	.26	.16	---
Combine, contract	6-foot	1.0	2.02	1.25	36	.73	.45	---
Bind	6-foot	1.0	2.01	1.25	23	.46	.29	---
Bind, horses	6-foot	1.0	1.90	4.00	8	.15	---	.32
Bind, contract	6-foot	1.0	2.01	1.25	20	.40	.25	---
Shock by hand	---	1.0	1.83	---	31	.57	---	---
Haul bundles	---	1.0	5.31	1.90	51	2.71	.97	---
Thresh, contract	---	1.0	2.40	1.10	51	1.22	.56	---
Haul grain, truck	1½-ton	1.0	1.62	.92	82	1.33	---	---
Haul grain, horses	---	1.0	1.54	1.94	3	.05	---	.06
Haul, truck, contract	1½-ton	1.0	1.62	.92	2	.03	---	---
Total harvest						7.91	2.68	.38
Total 1/						21.51	7.68	2.89

1/ In addition, truck use averaged 0.77 hour an acre.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA III-C3, 1950

The data presented here are based on a survey made in 1951 of 14 farms producing oats, barley, and winter wheat on irrigated land in east central Colorado. These farms are located in the western edge of the Colorado portion of type-of-farming, area III-C3, a wheat and range-livestock area in the Central High Plains.

The farms surveyed averaged about 350 acres per farm. Cropland comprised about 309 acres. In 1950, 29 acres were in irrigated oats, and the yield averaged approximately 48 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 36; the most common was about 22.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	2.3	1.25	2.88	100	2.88
Ceresan	Bu.	2.3	.03	.07	58	.04
Spray (2,4-D)	Pt.	.8	.62	.50	13	.06
Manure	Ton	15	[1] 2.00	30.00	28	8.40
Water	Acre	1.0	1.60	1.60	100	1.60
Twine	Lb.	3.1	.25	.78	32	.25
Total materials						13.23

CONTRACT WORK HIRED

Spraying	Acre	1.0	2.40	2.40	3	.07
Combining	Acre	1.0	3.85	3.85	22	.85
Threshing	Bu.	61	.09	5.49	17	.93
Total contract work						1.85

[1] Estimated.

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area III-C3, Central High Plains, Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, sp., h.	60-bu.	1.0	4.40	8.80	11	0.48	---
Apply manure, spreader	60-bu.	1.5	4.40	4.40	17	1.12	1.12
Plow, moldboard	2-14 inch	1.0	1.09	1.04	52	.57	.54
Plow, moldboard	3-14 inch	1.0	.99	.94	28	.28	.26
Plow, Graham	10-foot	1.0	.30	.28	3	.01	.01
Plow, one-way	10-foot	1.0	.32	.30	17	.05	.05
Harrow, springtooth	12-foot	1.0	.46	.42	10	.05	.04
Harrow, spiketooth	18-foot	2.1	.21	.19	76	.33	.30
Disk, tandem	10-foot	1.3	.53	.50	20	.14	.13
Level, wooden	14-foot	1.5	.46	.44	9	.06	.06
Level	12-foot	1.4	.50	.47	52	.36	.34
Drill	10-foot	1.0	.48	.44	100	.48	.44
Plow for ditches	1-14 inch	1.0	.20	.15	25	.05	.04
Ditch	4-foot	1.0	.20	.19	42	.08	.08
Irrigate	---	1.2	1.20	---	100	1.44	---
Spray	20-foot	1.0	.22	.19	10	.02	.02
Spray, contract	20-foot	1.0	.22	.19	3	.01	.01
Total preharvest						5.53	3.44
Combine	5-foot	1.0	1.15	1.06	29	.33	.31
Combine, self-propelled	14-foot	1.0	.38	.34	17	.06	---
Combine, s.p., contract	12-foot	1.0	.59	.54	22	.13	---
Haul, truck	1½-ton	1.0	.47	.39	68	.32	---
Bind	8-foot	1.0	1.18	.52	32	.38	.17
Shock	---	1.0	1.10	---	15	.17	---
Haul bundles, buckrake	---	1.0	.69	.63	32	.22	.20
Thresh	---	1.0	2.64	.60	15	.40	.09
Thresh, contract	---	1.0	2.64	.60	17	.45	.10
Haul grain, truck	1½-ton	1.0	.90	.82	32	.29	---
Total harvest						2.75	.87
Total 1/						8.28	4.31

1/ In addition, truck use averaged 0.53 hour an acre, self-propelled combine 0.18 hour an acre, and horse work 0.97 hour an acre.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D1, 1950

The data presented here are based on a survey made in 1950 of approximately 60 farms producing oats under irrigation in 1950. These farms are located in type-of-farming area VI-D1, a general farming area in the irrigated valleys of southeastern Idaho and central Utah. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 120 acres per farm. Cropland comprised about 82 acres. In 1950, about 7 acres were in oats, and the average yield was approximately 68 bushels per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 11 to 20; the most common was about 15.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.00	3.95	3.95	100	3.95
Manure	Ton	13	1/2.00	26.00	26	6.76
Mixed fertilizer	Cwt.	1.35	3.55	4.79	12	.57
Binder twine	Lb.	3.7	.28	1.04	41	.43
Water	Acre	1.0	2.30	2.30	100	2.30
Total materials						14.01

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating	Cwt.	1.00	.22	.22	75	.16
Combining	Acre	1.0	5.50	5.50	12	.66
Binding	Acre	1.0	3.50	3.50	18	.63
Threshing	Bu.	68	.10	6.80	41	2.79
Hauling	Bu.	68	.05	3.40	10	.34
Total contract work						4.58

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area VI-D1, southeastern Idaho and central Utah, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	4.95	4.02	21	1.04	0.84	---
Apply manure, horses-sp.	60-bu.	1.0	7.11	8.58	5	.36	---	0.43
Plow, moldboard	2-16 inch	1.0	1.54	1.47	45	.69	.66	---
Plow, moldboard	2-14 inch	1.0	1.70	1.62	33	.56	.53	---
Plow, moldboard	1-16 inch	1.0	2.48	2.36	3	.07	.07	---
Plow, moldboard, horses	1-14 inch	1.0	6.40	18.10	5	.32	---	.90
Disk, tandem	7-foot	1.1	.68	.65	40	.30	.29	---
Harrow, spiketooth	10-foot	2.1	.56	.51	72	.85	.77	---
Harrow, spiketooth, h.	10-foot	3.1	1.20	3.30	15	.56	---	1.53
Level	8-foot	1.2	.60	.55	57	.41	.38	---
Level, horses	8-foot	1.2	1.30	3.44	11	.17	---	.45
Weed	6-foot	1.0	.85	.77	10	.08	.08	---
Corrugate	8-foot	1.0	.58	.52	18	.10	.09	---
Fertilize, spreader	10-foot	1.0	.82	.51	12	.10	.06	---
Seed, drill	8-foot	1.0	.66	.58	74	.49	.43	---
Seed, drill, horses	7-foot	1.0	1.19	2.09	26	.31	---	.54
Irrigate	---	2.6	1.80	---	100	4.68	---	---
Ditch	---	1.0	.84	.74	51	.43	.38	---
Ditch, horses	---	1.0	1.32	1.32	20	.26	---	.26
Ditch by hand	---	1.0	.87	---	34	.30	---	---
Total preharvest						12.08	4.58	4.11
Combine, self-propelled	12-foot	1.0	.80	.74	17	.14	---	---
Combine	6-foot	1.0	1.45	1.28	30	.44	.38	---
Combine, contract	6-foot	1.0	1.45	1.28	12	.17	.15	---
Bind	6-foot	1.0	1.60	1.45	16	.26	.23	---
Bind, horses	6-foot	1.0	1.88	3.96	7	.13	---	.28
Bind, contract	6-foot	1.0	1.60	1.45	18	.29	.26	---
Shock by hand	---	1.0	1.32	---	20	.26	---	---
Haul bundles	---	1.0	5.50	2.00	41	2.26	.82	---
Thresh	---	1.0	2.40	1.10	41	.98	.45	---
Haul grain, truck	1½-ton	1.0	1.38	1.16	57	.79	---	---
Haul grain, horses	---	1.0	2.38	3.19	11	.26	---	.35
Haul, truck, contract	1½-ton	1.0	1.38	1.16	10	.14	---	---
Total harvest						6.12	2.29	.63
Total 1/						18.20	6.87	4.74

1/ In addition, self-propelled combine use averaged 0.13 hour an acre and truck use 0.78 hour an acre.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D3, 1950

The data presented here are based on a survey made in 1951 of 34 farms producing oats under irrigation in 1950. These farms are located in type-of-farming area VI-D3, a general farming area in the San Luis Valley in south central Colorado. The particular farms surveyed are quite diversified, producing livestock, hay, small grains, and potatoes.

The farms averaged about 495 acres. Cropland comprised about 276 acres. In 1950, about 32 acres were in oats, and the average yield was approximately 40 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 11 to 33; the most common was about 20.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	3.0	0.85	2.55	50	1.28
Purchased seed	Bu.	3.0	1.20	3.60	50	1.80
Ceresan	Bu.	3.0	.11	.33	36	.12
Spray (2,4-D)	Pt.	1.1	.50	.55	2	.01
Water, ditch	Acre	1.0	.95	.95	100	.95
Water, pump	Acre	1.0	2.50	2.50	48	1.20
Twine, binder	Lb.	2.7	.27	.73	49	.36
Total materials						5.72

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Subsoiling	Acre	1.0	5.70	5.70	8	.46
Threshing	Bu.	40	.11	4.40	34	1.50
Combining	Acre	1.0	5.50	5.50	17	.94
Total contract work						2.90

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area VI-D3, south central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Subsoil, contract	3-30 inch	1.0	0.73	0.69	8	0.06	0.06
Plow, moldboard	2-16 inch	1.0	1.31	1.25	39	.51	.49
Plow, moldboard	3-16 inch	1.0	1.03	.99	13	.13	.13
Plow, Graham	8-foot	1.0	.56	.54	19	.11	.10
Disk, tandem	8-foot	1.1	.63	.60	42	.29	.28
Irrigate	---	1.0	.76	---	66	.50	---
Harrow, springtooth	8-foot	1.3	.34	.32	31	.14	.13
Harrow, spiketooth	15-foot	1.7	.23	.21	32	.12	.12
Level	9-foot	2.0	.51	.48	72	.73	.69
Level, wooden	9-foot	1.0	.60	.58	11	.07	.06
Drill	8-foot	1.0	.60	.55	100	.60	.55
Ditch	6-foot	1.0	.13	.12	70	.09	.08
Dike	2-disk	1.0	.13	.12	28	.04	.03
Irrigate	---	2.3	.71	---	100	1.63	---
Spray	20-foot	1.0	.25	.22	2	.01	.01
Total preharvest						5.03	2.73
Windrow	10-foot	1.0	.66	.53	18	.12	.10
Combine	6-foot	1.0	1.08	.99	34	.37	.34
Combine, contract	12-foot	1.0	1.04	.95	17	.18	.16
Haul from combine, t.	1½-ton	1.0	.38	.35	47	.18	---
Haul from combine, h.	---	1.0	1.25	2.30	4	.05	---
Bind	10-foot	1.0	.84	.53	49	.41	.26
Shock by hand	---	1.0	1.70	---	49	.83	---
Haul bundles	---	1.0	3.15	2.12	27	.85	.57
Haul bundles, horses	---	1.0	3.18	5.64	22	.70	---
Thresh	---	1.0	.90	.52	15	.14	.08
Thresh, contract	---	1.0	.90	.52	34	.31	.18
Haul grain, truck	1½-ton	1.0	.79	.56	41	.32	---
Haul grain, horses	---	1.0	.52	.94	8	.04	---
Total harvest						4.50	1.69
Total 1/						9.53	4.42

1/ In addition, truck use averaged 0.39 hour an acre and horse work 1.41 hours per acre.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of 25 farms producing oats under irrigation. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in southeastern Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms surveyed averaged about 299 acres per farm. Cropland comprised about 230 acres. In 1950, 18 acres were in oats, and the yield averaged about 53 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 11 to 33; the most common was about 20.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 1/	Bu.	2.9	1.50	4.35	100	4.35
Ceresan	Bu.	2.9	.08	.23	7	.02
Manure	Ton	10	2/2.00	20.00	1	.20
Mixed fertilizer	Cwt.	1.85	4.50	8.33	23	1.92
Water, ditch	Acre	1.0	2.00	2.00	100	2.00
Water, pump	Acre	1.0	3.00	3.00	8	.24
Twine, binder	Lb.	3.3	.27	.89	77	.69
Total materials						9.42

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating	Bu.	2.9	.42	1.22	5	.06
Binding	Acre	1.0	3.65	3.65	12	.44
Threshing	Bu.	53	.07	3.71	77	2.86
Hauling grain	Bu.	53	.03	1.59	17	.27
Combining	Acre	1.0	4.85	4.85	8	.39
Total contract work						4.02

1/ Approximately 14 percent of the farmers in this area used home-grown seed.

2/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Stalk cutting	2-row	1.0	0.38	0.37	3	0.01	0.01
Apply manure, ldr.-sp.	60-bu.	1.0	3.17	3.17	1	.03	.03
Fertilize, spreader	8-foot	1.0	.54	.47	2	.01	.01
Plow, moldboard	1-16 inch	1.0	2.38	2.27	7	.17	.16
Disk, tandem	8-foot	1.9	.52	.49	90	.89	.84
Harrow, spiketooth	15-foot	1.6	.24	.22	69	.26	.24
Harrow, spiketooth	18-foot	2.4	.21	.19	28	.14	.13
Roll	10-foot	1.8	.41	.38	50	.37	.34
Level	9-foot	2.1	.51	.48	33	.35	.33
Level	12-foot	2.3	.43	.41	42	.42	.39
Irrigate	---	2.8	1.43	---	16	.64	---
Seed, drill	8-foot	1.0	.62	.57	42	.26	.24
Seed, drill	10-foot	1.0	.51	.46	58	.30	.27
Ditch	6-foot	1.0	.11	.10	60	.07	.06
Corrugate	5-row	1.0	.49	.45	100	.49	.45
Irrigate	---	2.8	1.43	---	100	4.00	---
Total preharvest						8.41	3.50
Bind	8-foot	1.0	.90	.79	25	.22	.20
Bind	10-foot	1.0	1.09	.68	40	.44	.27
Bind, contract	10-foot	1.0	1.09	.68	12	.13	.08
Shock	---	1.0	1.60	---	75	1.20	---
Haul bundles	---	1.0	3.96	.95	59	2.34	.56
Haul bundles, truck	---	1.0	3.88	1.01	18	.70	---
Thresh, contract	28-inch	1.0	.84	.52	77	.65	.40
Haul grain, truck	---	1.0	.55	.54	60	.33	---
Haul grain, t., contract	---	1.0	.32	.29	17	.05	---
Combine	5-foot	1.0	1.45	1.33	15	.22	.20
Combine, contract	5-foot	1.0	1.45	1.33	8	.12	.11
Haul grain, truck	---	1.0	.82	.76	23	.19	---
Total harvest						6.59	1.82
Total 1/						15.00	5.32

1/ In addition truck use averaged 0.73 hour an acre.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, OREGON, 1950

The data presented here are based on a survey made in 1951 of approximately 30 farms producing barley, oats, and wheat under irrigation in central Oregon. These farms are located in type-of-farming area VI-D7, an area composed of irrigated valleys scattered throughout the western Mountain region. Livestock and specialized irrigated crops are the most important enterprises in these valleys.

The farms surveyed averaged about 128 acres per farm. Cropland comprised about 92 acres. In 1950, 9 acres were in irrigated oats, and the yield averaged about 52 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 7 to 27; the most common was about 17.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Bu.	2.8	1.35	3.78	100	3.78
Ceresan	Bu.	2.8	.11	.31	3	.01
Manure	Ton	3	[1]2.00	6.00	9	.54
Mixed fertilizer	Cwt.	2.65	4.05	10.73	31	3.33
Nitrate fertilizer (21-0-0)	Cwt.	2.10	3.80	7.98	10	.80
Phosphate fertilizer(0-18-0)	Cwt.	2.00	1.90	3.80	5	.19
Water	Acre	1.0	2.50	2.50	100	2.50
Sacks, replacement	No.	17	.26	4.42	16	.71
Twine, sack	Lb.	.21	.87	.18	34	.06
Twine, binder	Lb.	3.3	.28	.92	3	.03
Total materials						11.95

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	6.32	6.32	32	2.02
Threshing	Acre	1.0	4.50	4.50	3	.14
Total contract work						2.16

[1] Estimated.

Man labor, power, and machinery used by operation in producing and harvesting oats, area VI-D7, central Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	2.86	0.92	9	0.26	0.08
Fertilize, spreader	10-foot	1.0	.50	.44	16	.08	.07
Pick and haul rocks	---	1.0	.60	.60	3	.02	.02
Plow, moldboard	2-16 inch	1.0	1.61	1.53	61	.98	.93
Disk, tandem	8-foot	1.5	.59	.57	56	.50	.48
Disk, offset	4-foot	1.6	.99	.94	38	.60	.57
Harrow, spiketooth	8-foot	1.7	.55	.50	78	.73	.66
Harrow, springtooth	8-foot	2.3	.62	.57	9	.13	.12
Level, steel	10-foot	1.4	.53	.50	12	.09	.08
Level, steel	8-foot	1.5	.66	.63	16	.16	.15
Roll	8-foot	1.2	.62	.57	36	.27	.24
Drill	8-foot	1.0	.62	.57	33	.20	.19
Drill	10-foot	1.0	.51	.46	67	.34	.31
Border strip	---	1.0	.48	.44	11	.05	.05
Harrow, spiketooth	8-foot	1.0	.69	.63	5	.03	.03
Corrugate	8-foot	1.0	.59	.54	65	.38	.35
Irrigate	---	3.0	.52	---	100	1.56	---
Total preharvest						6.38	4.33
Combine, bulk	6-foot	1.0	1.95	1.50	54	1.05	.81
Combine, sacked	6-foot	1.0	2.85	1.43	11	.31	.16
Combine, bulk, contract	6-foot	1.0	1.95	1.50	9	.16	.14
Combine, sacked, c.	6-foot	1.0	2.85	1.43	23	.66	.33
Bind	8-foot	1.0	1.04	.91	3	.03	.03
Haul and thresh, c.	---	1.0	---	---	3	---	---
Haul grain	---	1.0	.75	.52	36	.27	.19
Haul grain, truck	1½-ton	1.0	.45	.41	47	.21	---
Total harvest 1/						2.69	1.66
Total 2/						9.07	5.99

1/ Excludes hauling and threshing done on a contract basis for which no rates were available.

2/ In addition, truck use averaged 0.19 hour an acre.

Note: c. = operation performed on contract basis.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, 1952

The data presented here are based on a survey made in 1952 of 40 farms that produced oats under irrigation in 1952 in central Wyoming. These farms are located in type-of-farming area VI-D7, which is comprised of comparatively small irrigated valleys in the Intermountain region. The particular type-of-farming area in which these farms lie is located along Muddy Creek and Wind and Big Horn Rivers in central Wyoming. Much of the farming area is under newly established reclamation projects and many of the farms have been in operation only a few years. General farming prevails in the area.

The farms surveyed averaged about 200 acres per farm. In 1952, approximately 150 acres were in crops, including 24 in irrigated oats. The average yield of oats was about 55 bushels an acre. Most of the farmers in this area grow small grains in their rotations partly as a supplement to their feeding operations and partly as a nurse crop for new seedings of alfalfa. Oats and barley are the most common small-grain crops grown in the area.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 26; the most common was about 20.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Cwt.	1.10	4.30	4.73	100	4.73
Manure	Ton	7	1/ 2.00	14.00	3	.42
Mixed fertilizer (10-20-0)	Cwt.	1.25	4.45	5.56	17	.95
Nitrate fertilizer (33-0-0)	Cwt.	1.00	5.00	5.00	5	.25
Spray (2,4-D)	Pt.	1.0	.75	.75	10	.08
Water	Acre	1.0	2.10	2.10	100	2.10
Twine	Lb.	3.5	.35	1.22	44	.54
Total materials						9.07

CONTRACT WORK HIRED

Threshing	Bu.	55	.07	3.85	19	.73
Total contract work						.73

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area VI-D7, central Wyoming, 1952

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	3.63	3.63	3	0.11	0.11
Plow, moldboard	1-18 inch	1.0	1.87	1.78	13	.24	.23
Plow, moldboard	2-14 inch	1.0	1.50	1.43	38	.57	.54
Plow, moldboard	2-16 inch	1.0	1.38	1.31	43	.59	.56
Disk, tandem	8-foot	1.9	.47	.45	62	.55	.53
Harrow	15-foot	2.3	.29	.26	95	.64	.57
Fertilize	8-foot	1.0	.54	.47	12	.06	.06
Level	9-foot	1.9	.48	.46	99	.90	.86
Seed, drill	8-foot	1.0	.54	.49	80	.43	.39
Seed, drill	10-foot	1.0	.47	.43	20	.09	.09
Cultipack	8-foot	1.0	.46	.42	11	.05	.05
Ditch	---	1.4	.23	.21	88	.28	.26
Corrugate	5-22 inch	1.0	.44	.40	35	.15	.14
Spray	24-foot	1.0	.23	.22	10	.02	.02
Irrigate	---	3.1	4.50	---	100	13.95	---
Total preharvest						18.63	4.41
Windrow	7-foot	1.0	.68	.62	9	.06	.06
Bind	8-foot	1.0	1.38	.80	44	.61	.35
Shock	---	1.0	1.65	---	22	.36	---
Haul bundles	---	1.0	5.25	2.42	44	2.31	1.06
Thresh	---	1.0	1.68	.77	25	.42	.19
Thresh, contract	---	1.0	1.68	.77	19	.32	.15
Combine	5-foot	1.0	1.40	1.17	6	.08	.07
Combine	6-foot	1.0	1.35	1.04	23	.31	.24
Combine	12-foot	1.0	.62	.58	27	.17	.16
Truck	1½-ton	1.0	.83	.83	90	.75	---
Total harvest						5.39	2.28
Total 1/						24.02	6.69

1/ In addition, truck use averaged 0.75 hour an acre.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F1, 1950

The data presented here are based on a survey made in 1950 of approximately 45 farms producing oats under irrigation in 1950, in north central Wyoming and south central Montana. These farms are located in type-of-farming area IX-F1, a general farming and specialized cropping area in the irrigated valleys along the Big Horn, Shoshone, and Yellowstone Rivers in Montana and Wyoming. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 415 acres per farm. Cropland comprised about 128 acres. In 1950, approximately 13 acres were in oats, and the yield averaged about 58 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 13 to 26; the most common size was about 19.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.10	3.90	4.29	100	4.29
Mixed fertilizer	Cwt.	1.60	3.70	5.92	29	1.72
Water	Acre	1.0	2.50	2.50	100	2.50
Binder twine	Lb.	3.6	.30	1.08	36	.39
Total materials						8.90

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	1.10	.23	.25	52	.13
Combining	Acre	1.0	5.50	5.50	7	.38
Binding	Acre	1.0	3.50	3.50	16	.56
Threshing	Bu.	58	.08	4.64	36	1.67
Total contract work						2.73

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area IX-F1, north central Wyoming and south central Montana, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-16 inch	1.0	1.33	1.26	35	0.47	0.44
Plow, moldboard	2-14 inch	1.0	1.50	1.42	6	.09	.09
Plow, moldboard	1-16 inch	1.0	2.25	2.14	22	.50	.47
Disk, tandem	8-foot	1.2	.65	.62	52	.41	.38
Fertilize, spreader	10-foot	1.0	.85	.55	29	.25	.16
Harrow, spiketooth	15-foot	1.9	.44	.40	75	.63	.57
Level	10-foot	1.7	.47	.43	92	.74	.67
Weed	12-foot	1.0	.68	.62	2	.01	.01
Seed, drill	8-foot	1.0	.61	.54	100	.61	.54
Corrugate	6-row	1.0	.44	.40	61	.27	.24
Irrigate	---	3.3	2.36	---	100	7.79	---
Ditch	---	1.4	.55	.51	95	.73	.67
Ditch by hand	---	1.1	.37	---	27	.11	---
Total preharvest						12.61	4.24
Windrow	9-foot	1.0	.54	.49	16	.09	.08
Combine	6-foot	1.0	1.46	1.29	57	.83	.74
Combine, contract	6-foot	1.0	1.46	1.29	7	.10	.09
Bind	7-foot	1.0	1.76	1.55	20	.35	.31
Bind, contract	7-foot	1.0	1.76	1.55	16	.28	.25
Shock by hand	---	1.0	1.50	---	30	.45	---
Haul bundles	---	1.0	5.78	2.31	36	2.08	.83
Thresh, contract	---	1.0	2.40	1.10	36	.86	.40
Haul, truck	1½-ton	1.0	1.14	1.13	97	1.11	---
Total harvest						6.15	2.70
Total 1/						18.76	6.94

1/ In addition, truck use averaged 1.10 hours an acre.

OATS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F2, 1951

The data presented here are based on a survey made in 1951 of approximately 50 farms producing oats under irrigation in 1951 in southeastern Wyoming and west central Nebraska. These farms are located in type-of-farming area IX-F2, a specialized crop and general farming area along the North Platte and Laramie Rivers. The particular farms surveyed are diversified, producing livestock, hay, corn, small grains, and specialized crops.

The farms averaged about 200 acres per farm. Cropland comprised about 153 acres. In 1951, approximately 18 acres were in oats, and the yield was about 44 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 27. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.90	3.75	3.38	100	3.38
Seed-treating	Cwt.	.90	.25	.22	75	.16
Manure	Ton	7	1/2.00	14.00	5	.70
Spray (2,4-D)	Pt.	1.0	.50	.50	10	.05
Water	Acre	1.0	1.60	1.60	100	1.60
Twine	Lb.	3.8	.35	1.33	53	.70
Total materials						6.59

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	5.00	5.00	26	1.30
Threshing	Bu.	44	.13	5.72	42	2.40
Total contract work						3.79

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting oats, irrigated, area IX-F2, southeastern Wyoming and west central Nebraska, 1951

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, sp.	75-bu.	1.0	3.85	3.85	5	0.19	0.19
Plow, moldboard	2-16 inch	1.0	1.26	1.21	29	.37	.35
Plow, moldboard	2-14 inch	1.0	1.50	1.43	28	.42	.40
Disk, tandem	8-foot	1.6	.55	.50	67	.59	.54
Harrow, springtooth	9-foot	1.7	.55	.50	17	.16	.14
Harrow, spiketooth	15-foot	2.3	.31	.28	83	.59	.53
Level	10-foot	1.6	.47	.45	80	.60	.58
Seed, drill	10-foot	1.0	.52	.47	100	.52	.47
Ditch	---	1.0	.37	.24	85	.31	.20
Ditch by hand	---	1.0	.47	---	15	.07	---
Irrigate	---	1.9	3.92	---	100	7.45	---
Spray	24-foot	1.0	.57	.43	10	.06	.04
Total preharvest						11.43	3.44
Bind	8-foot	1.0	1.46	.72	53	.77	.38
Shock by hand	---	1.0	1.57	---	50	.78	---
Haul to thresher	---	1.0	3.55	2.12	53	1.88	1.12
Thresh	22-inch	1.0	1.51	.52	11	.17	.06
Thresh, contract	22-inch	1.0	1.51	.52	42	.63	.22
Combine	6-foot	1.0	1.45	1.33	21	.30	.28
Combine, contract	6-foot	1.0	1.45	1.33	26	.38	.35
Haul, truck	1½-ton	1.0	1.10	1.05	80	.88	---
Total harvest						5.79	2.41
Total 1/						17.22	5.85

1/ In addition truck use averaged 0.84 hour an acre.

OATS: RESOURCES USED IN PRODUCTION, AREA III-C2, 1950

The data presented here are based on a survey made in 1951 of 23 farms producing oats. These farms are located in type-of-farming area III-C2, a wheat and range-livestock area in northeastern Montana and southwestern North Dakota.

The farms surveyed averaged 1,212 acres per farm. Cropland comprised about 447 acres. In 1950, 42 acres were in oats, and the yield averaged about 30 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 16 to 29; the most common was about 22.

Materials used and contract work hired, 1950 1/

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 2/	Bu.	1.6	0.76	1.22	100	1.22
Twine	Lb.	2.2	.25	.55	60	.33
Total materials						1.55

1/ No contract work reported on farms surveyed in this area.

2/ Approximately 13 percent of the farmers in this area purchased seed oats.

Man labor, power, and machinery used by operation in producing and harvesting oats, area III-C2, northeastern Montana and southwestern North Dakota, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.68	0.65	50	0.34	0.33
Plow and pack	3-14 inch	1.0	.95	.90	17	.16	.15
Disk, tandem	10-foot	1.0	.33	.32	5	.02	.02
Harrow, spiketooth	25-foot	2.0	.11	.11	40	.09	.09
Harrow, springtooth	12-foot	2.0	.19	.18	7	.03	.03
Cultipack	10-foot	1.0	.35	.34	14	.05	.05
Drill	10-foot	1.0	.29	.26	76	.22	.20
Plow, pack & pony drill	4-foot	1.0	.58	.53	12	.07	.06
Disk and drill	12-foot	1.0	.29	.26	12	.03	.03
Harrow, spiketooth	25-foot	1.0	.10	.09	20	.02	.02
Total preharvest						1.03	.98
Windrow	10-foot	1.0	.44	.42	12	.53	.50
Combine	12-foot	1.0	.40	.36	40	.16	.14
Haul grain, truck	---	1.0	.25	.14	40	.10	---
Bind	8-foot	1.0	.63	.58	60	.38	.35
Shock by hand	---	1.0	.99	---	60	.59	---
Haul bundles, horses	---	1.0	1.86	2.50	60	1.12	---
Thresh	---	1.0	.55	.24	60	.33	.14
Total harvest						3.21	1 13
Total 1/						4.24	2.11

1/ In addition, horse work averaged 1.50 hours an acre, and truck use 0.06 hour an acre.

OATS: RESOURCES USED IN PRODUCTION, AREA IV-E1, 1950

The data presented here are based on a survey made in 1950 of 29 farms producing oats in the Willamette Valley of western Oregon. These farms are located in type-of-farming area IV-E1, a dairy and mixed-farming area ranging from the Puget Sound area south through the Willamette Valley.

The farms surveyed averaged about 309 acres per farm. Cropland comprised about 234 acres. In 1950, 29 acres were in oats, and the yield averaged approximately 44 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 14 to 29; the most common was about 20.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 1/	Bu.	2.9	1.05	3.04	100	3.04
Clean and treat seed	Bu.	2.9	.13	.38	43	.16
Mixed fertilizer	Cwt.	1.20	4.10	4.92	11	.54
Sulphate fertilizer	Cwt.	1.05	3.20	3.36	18	.60
Nitrate fertilizer	Cwt.	.65	4.15	2.70	7	.19
Limestone	Ton	3	5.00	15.00	3	.45
Spray (2,4-D)	Pt.	1.4	.60	.84	18	.15
Sacks, replacement	No.	16	.23	3.68	27	.99
Sack strings	No.	16	.01	.16	69	.11
Total materials						6.23

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	1.50	1.50	10	.15
Combining	Acre	1.0	4.10	4.10	6	.25
Total contract work						.40

1/ Approximately 86 percent of the farmers in this area purchased seed oats.

Man labor, power, and machinery used by operation in producing and harvesting oats, area IV-E1, western Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-14 inch	1.0	1.14	1.09	56	0.64	0.61
Plow, moldboard	3-14 inch	1.0	.92	.88	40	.37	.35
Disk, tandem	7-foot	1.5	.49	.47	82	.61	.57
Fertilize, drill	10-foot	1.0	.32	.28	13	.04	.04
Harrow, springtooth	12-foot	3.0	.34	.32	12	.12	.12
Harrow, spiketooth	15-foot	2.0	.26	.24	93	.48	.45
Roll	10-foot	1.0	.40	.37	8	.03	.03
Seed, drill	8-foot	1.0	.48	.44	36	.17	.16
Seed, drill	10-foot	1.0	.33	.30	64	.21	.19
Roll	10-foot	1.0	.40	.37	22	.09	.08
Harrow, spiketooth	8-foot	1.0	.39	.36	9	.04	.03
Spray	18-foot	1.0	.22	.19	8	.02	.02
Spray, contract	18-foot	1.0	.22	.19	10	.02	.02
Total preharvest						2.84	2.67
Combine, sacked	6-foot	1.0	2.12	.98	44	.93	.43
Combine, sacked, c.	6-foot	1.0	2.12	.98	6	.13	.06
Combine, bulk	6-foot	1.0	1.09	1.00	21	.23	.21
Combine, sacked	12-foot	1.0	1.20	.55	19	.23	.10
Combine, s.p., bulk	12-foot	1.0	.72	.67	10	.07	---
Haul, sacked	---	1.0	.69	.42	13	.09	.05
Haul, sacked, truck	1½-ton	1.0	.80	.37	56	.45	---
Haul, bulk, truck	1½-ton	1.0	.34	.31	31	.11	---
Total harvest						2.24	.85
Total 1/						5.08	3.52

1/ In addition, truck use averaged 0.31 hour an acre and self-propelled combine 0.07 hour an acre.

Note: c. = operation performed on contract basis.

ONIONS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A5, 1952

The data presented here are based on a survey made in 1952 of approximately 40 farms producing onions under irrigation in 1952 in west central Colorado. These farms are located in type-of-farming area I-A5, which is comprised of comparatively small irrigated valleys at the foot of the Rocky Mountains in west central Colorado. Fruit and mixed farming predominates in this area. The farms are comparatively small units but are intensively operated.

The farms surveyed averaged about 160 acres per farm. In 1952, approximately 100 acres were in crops, including 6.7 in onions. The average yield of onions was about 300 hundredweight an acre. Onion production in this area is rather specialized and is restricted to small localities.

Tractors and motorized equipment provided most of the power used on these farms, although horses were used some for cultivating. The drawbar-horsepower rating of the tractors ranged from 13 to 26; the most common was about 19.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Lb.	3.3	5.50	18.15	100	18.15
Manure	Ton	8	1/ 2.00	16.00	16	2.56
Mixed fertilizer (7-21-7)	Cwt.	2.50	4.10	10.25	41	4.20
Nitrate fertilizer (33-0-0)	Cwt.	1.50	4.40	6.60	50	3.30
Nitrate fertilizer (20-0-0)	Cwt.	2.25	3.10	6.98	28	1.95
Phosphate fertilizer(0-43-0)	Cwt.	2.00	3.85	7.70	43	3.31
Dust (DDT and sulphur) 2/	Lb.	84	.08	6.72	50	3.36
Spray (10% DDT) 3/	Lb.	44	.13	5.72	37	2.12
Water	Acre	1.0	2.80	2.80	100	2.80
Sacks	No.	500	.20	100.00	30	30.00
Total materials						71.75

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Weeding	Hour	25	.75	18.75	11	2.06
Spraying 4/	Acre	2.0	1.25	2.50	11	.28
Dusting 4/	Acre	2.5	1.50	3.75	16	.60
Top and sack 5/	Bag	500	.13	65.00	30	19.50
Hauling	Cwt.	300	.08	24.00	22	5.28
Total contract work						27.72

1/ Estimated. 2/ Approximately half of the acreage was dusted with 2.1 applications of dust containing 50 percent sulphur and 5 percent DDT. An average of 40 pounds of dust was applied each dusting. 3/ About 37 percent of the acreage was sprayed approximately 2.9 times with an average application of 15 pounds of 10 percent DDT. 4/ One acre times average number of times over. 5/ Estimated at 60 pounds per bag.

Man labor, power, and machinery used by operation in producing and harvesting onions, irrigated, area I-A5, west central Colorado, 1952

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	5.06	5.06	16	0.81	0.81
Plow, moldboard	1-16 inch	1.0	2.41	2.30	63	1.52	1.45
Plow, moldboard	2-14 inch	1.0	1.53	1.46	37	.57	.54
Disk, tandem	7-foot	2.2	.60	.58	93	1.23	1.19
Harrow, spiketooth	10-foot	2.2	.41	.38	55	.50	.46
Harrow, spiketooth	15-foot	2.0	.34	.32	18	.12	.12
Level	8-foot	2.2	.58	.56	100	1.28	1.23
Fertilize	8-foot	1.1	.54	.47	95	.56	.49
Corrugate	2-row	1.0	1.58	1.44	16	.25	.23
Corrugate	3-row	1.0	1.17	1.07	84	.98	.90
Plant	2-row	1.0	2.58	2.36	11	.28	.26
Plant	4-row	1.0	1.40	1.29	31	.43	.40
Plant	6-row	1.0	.92	.85	58	.53	.49
Ditch	---	1.0	.24	.22	85	.20	.19
Cultivate	2-row	3.9	2.88	2.62	16	1.80	1.64
Cultivate	4-row	3.9	1.51	1.38	25	1.47	1.34
Cultivate	6-row	4.2	1.15	1.05	45	2.17	1.98
Cultivate, horses	2-row	3.0	3.45	6.60	14	1.45	---
Irrigate	---	13.5	5.61	---	100	75.74	---
Weed by hand	---	3.3	26.21	---	89	76.98	---
Weed by hand, contract	---	3.2	26.21	---	11	9.23	---
Spray	24-foot	3.0	.40	.35	26	.31	.27
Spray, contract	24-foot	2.5	.40	.35	11	.11	.10
Dust	24-foot	2.2	.40	.35	34	.30	.26
Dust, contract	24-foot	2.0	.40	.35	16	.13	.11
Total preharvest						178.95	14.46
Dig	2-row	1.0	3.45	3.15	19	.66	.60
Dig	4-row	1.0	1.84	1.68	30	.55	.50
Dig	6-row	1.0	1.26	1.16	51	.64	.59
Top and sack	---	1.0	82.52	---	70	57.76	---
Top and sack, contract	---	1.0	82.52	---	30	24.76	---
Haul, truck	1½-ton	1.0	12.17	4.83	78	9.49	---
Haul, truck, contract	1½-ton	1.0	12.17	4.83	22	2.68	---
Total harvest						96.54	1.69
Total 1/						275.49	16.15

1/ In addition, horse work averaged 2.77 hours an acre and truck use 4.83 hours an acre.

ONIONS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-B1, 1950

The data presented here are based on a survey made in 1950 of approximately 20 farms producing dry onions in 1950 in east central Oregon and west central Idaho. These farms are located in type-of-farming area VI-B1, a dairy, hay, and specialized-crop area in the irrigated valleys along the Lower Snake River. Onion production in this area is a specialized enterprise requiring considerable resources per acre, particularly man labor. In 1950, most of the onions were grown by Japanese-Americans.

The farms surveyed averaged about 150 acres per farm. In 1950, 137 acres were in crops, including 23 in onions. The average yield of onions was approximately 560 hundredweight per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 26; the most common was about 20.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	2.6	6.10	15.86	100	15.86
Manure	Ton	17	1/2.00	34.00	10	3.40
Mixed fertilizer (10-16-8) 2/	Cwt.	9.00	3.95	35.55	63	22.40
Mixed fertilizer 2/	Cwt.	7.00	3.50	24.50	64	15.68
Dust, 10% DDT 3/	Lb.	86	.12	10.32	96	9.91
Spray, 25% DDT 4/	Qt.	2.5	.75	1.88	13	.24
Dust 5/	Lb.	22.0	.43	9.46	36	3.41
Sacks	No.	691	.05	34.55	100	34.55
Sack twine	Lb.	.6	.47	.28	10	.03
Water	Acre	1.0	4.00	4.00	100	4.00
Total materials						109.48

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Weeding	Acre	1.0	117.55	117.55	98	115.20
Dusting by plane 6/	Acre	7/1.2	2.80	3.36	59	1.98
Topping and pulling	Cwt.	560	.12	67.20	100	67.20
Bucking sacks	Cwt.	560	.03	16.80	100	16.80
Hauling	Cwt.	560	.08	44.80	100	44.80
Total contract work						245.98

1/ Estimated. 2/ All farms growing onions in this area applied fertilizer to the onion crop. The average application per acre of all kinds of fertilizer was approximately 1,015 pounds. About 68 percent of the fertilizer applied was 10-16-8, and 32 percent was comprised of fertilizer ranging from 0-18-0 to 34 percent nitrogen. 3/ The usual application was 30 or 40 pounds per acre for each application. 4/ The rate of application was 2 quarts per acre each time over. 5/ Comprised of altox, chlordane, sulphur and aero cyanate. The usual application was 20 pounds per acre each application. 6 The rate of application of dust was 35 pounds per acre at a cost of 8 cents per pound to apply. In addition, the producer furnished the dust which cost 12 cents per pound. 7/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting onions, irrigated, area VI-B1, east central Oregon and west central Idaho, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	2.18	1.66	10	0.22	0.17
Plow, moldboard	2-16 inch	1.0	1.43	1.36	83	1.19	1.13
Plow, moldboard	1-18 inch	1.0	2.29	2.18	17	.39	.37
Fertilize, spreader	10-foot	1.0	.67	.59	53	.36	.31
Disk, tandem	8-foot	1.8	.53	.50	58	.55	.52
Harrow, spiketooth	20-foot	2.4	.27	.25	100	.65	.60
Level	10-foot	1.8	.53	.48	68	.65	.58
Corrugate	6-row	1.0	.46	.42	31	.14	.13
Plant	6-row	1.0	.98	.94	91	.89	.86
Plant	4-row	1.0	1.53	1.47	9	.14	.13
Harrow, spiketooth	10-foot	1.0	.50	.45	39	.20	.18
Cultipack	10-foot	1.0	.58	.52	22	.13	.11
Cultivate, first	6-row	1.0	1.47	1.34	91	1.34	1.22
Cultivate, second	6-row	1.0	1.40	1.28	91	1.27	1.16
Cultivate, other	6-row	5.3	1.08	.99	91	5.21	4.78
Cultivate, first	4-row	1.0	2.20	2.01	9	.20	.18
Cultivate, second	4-row	1.0	2.10	1.92	9	.19	.17
Cultivate, other	4-row	4.3	1.62	1.48	9	.63	.57
Side-dress	6-row	1.8	.86	.76	91	1.41	1.25
Side-dress	4-row	1.8	1.29	1.14	9	.21	.18
Irrigate, first	---	1.0	3.38	---	100	3.38	---
Irrigate, second	---	1.0	2.89	---	100	2.89	---
Irrigate, other	---	7.8	2.83	---	100	22.07	---
Weed by hand, first 1/	---	1.0	35.18	---	100	35.18	---
Weed by hand, second 1/	---	1.0	30.76	---	100	30.76	---
Weed by hand, third 1/	---	1.0	24.04	---	100	24.04	---
Weed by hand, other 1/	---	2.5	19.32	---	100	48.30	---
Dust, and spray 2/	6-row	2.9	.64	.56	100	1.86	1.62
Ditch	---	1.0	.44	.39	100	.44	.39
Ditch by hand	---	1.0	.45	---	43	.19	---
Total preharvest						185.08	16.61
Lift	4-row	1.0	.90	.82	61	.55	.50
Top and pull, contract	---	1.0	67.20	---	100	67.20	---
Turn bags by hand	---	1.0	.51	---	48	.24	---
Buck. sacks, contract	---	1.0	16.80	---	100	16.80	---
Haul, truck, contract	---	1.0	8.60	7.85	100	8.60	---
Total harvest						93.39	.50
Total 3/						278.47	17.11

1/ Approximately 98 percent of the weeding was done by hired labor paid on an hourly basis.

2/ In addition 59 percent of the acres were dusted the last time by plane.

3/ In addition, truck use averaged 7.85 hours an acre.

ONIONS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of 30 farms producing onions under irrigation. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in southeastern Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms surveyed averaged about 214 acres per farm. Cropland comprised about 173 acres. In 1950, 26 acres were in onions, and the yield averaged about 243 hundredweight per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 10 to 45; the most common was about 21.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Lb.	2.7	4.85	13.10	100	13.10
Manure	Ton	9	1/ 2.00	18.00	8	1.44
Mixed fertilizer	Cwt.	2.30	3.80	8.74	75	6.56
Nitrate fertilizer	Cwt.	.65	4.10	2.66	25	.66
Dust	Acre	2/ 2.0	2.70	5.40	10	.54
Spray	Acre	2/ 1.3	2.35	3.05	25	.76
Water, ditch	Acre	1.0	2.55	2.55	100	2.55
Water, pump	Acre	1.0	3.20	3.20	8	.26
Sacks, picking, rental	No.	485	.02	9.70	20	1.94
Crates, replacement	No.	61	.40	24.40	80	19.52
Total materials						47.33

CONTRACT WORK HIRED

Hoeing and weeding	Acre	2/ 4.5	10.80	48.60	100	48.60
Dusting 3/	Acre	2/ 2.3	3.65	8.40	36	3.02
Spraying 3/	Acre	2/ 1.9	3.80	7.22	26	1.88
Pulling and topping	Cwt.	243	.23	55.89	100	55.89
Hauling	Cwt.	243	.10	24.30	36	8.75
Total contract work						118.14

1/ Estimated.

2/ One acre times average number of times over.

3/ Cost includes materials used.

Man labor, power, and machinery used by operation in producing and harvesting onions, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	60-bu.	1.0	5.61	2.55	3	0.17	0.08
Apply manure, ldr.-sp.	70-bu.	1.0	3.17	3.17	5	.16	.16
Plow, moldboard	2-14 inch	1.0	1.32	1.26	65	.86	.82
Disk, tandem	7-foot	2.5	.63	.60	86	1.36	1.29
Top-dress	8-foot	1.0	.54	.47	28	.15	.13
Harrow, spiketooth	15-foot	3.3	.23	.21	70	.53	.48
Harrow, springtooth	8-foot	1.0	.68	.62	42	.29	.26
Roll	10-foot	2.6	.39	.36	84	.85	.79
Landplane	10-foot	4.5	.58	.56	6	.16	.15
Level	9-foot	3.1	.48	.46	77	1.15	1.10
Irrigate	---	1.0	1.25	---	25	.31	---
Plant	6-row	1.0	.72	.66	100	.72	.66
Ditch	6-foot	1.0	.08	.08	17	.01	.01
Corrugate	6-row	1.4	.47	.43	20	.13	.12
Irrigate	---	10.2	1.18	---	100	12.04	---
Cultivate	6-row	4.9	.69	.63	100	3.38	3.09
Side-dress	6-row	1.3	.48	.42	14	.09	.08
Hoe and weed, contract	---	4.5	12.64	---	100	56.88	---
Dust	6-row	2.0	.32	.28	10	.06	.06
Dust, contract	---	2.3	---	---	36	---	---
Spray	6-row	1.3	.43	.38	25	.14	.12
Spray, contract	---	1.9	---	---	26	---	---
Total preharvest						79.44	9.40
Lift	6-row	1.0	.80	.74	86	.69	.64
Top and pull, contract	---	1.0	41.59	---	100	41.59	---
Buck to field edge	---	1.0	3.50	3.34	9	.32	.30
Haul from field, t.	---	1.0	21.06	7.45	58	12.21	---
Haul, truck, contract	---	1.0	21.06	7.45	36	7.58	---
Total harvest						62.39	.94
Total 1/						141.83	10.34

1/ In addition, truck use averaged 7.00 hours an acre.

DRY FIELD PEAS: RESOURCES USED IN PRODUCTION, AREA III-B1, 1948

The data presented here are based on a survey made in 1949 of approximately 33 farms producing dry field peas. These farms are located in type-of-farming area III-B1, the wheat-pea area of the Palouse Region of southeastern Washington and northern Idaho. Most of the peas are grown in rotation with wheat. Some spring-sown grains are grown also as well as sweet clover for green manure. Some land is summer fallowed primarily for weed control.

The farms surveyed averaged 467 acres per farm. In 1948, cropland comprised about 311 acres, of which 87 acres were in peas. The yield of dry field peas averaged about 1,250 pounds per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 18 to 45; the most common was about 28.

Materials used and contract work hired, 1948

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.4	5.50	7.70	100	7.70
Gypsum	Cwt.	1.20	.90	1.08	5	.05
Sodium chlorate	Lb.	109	.12	13.08	2	.26
Dust (DDT)	Lb.	22	.10	2.22	33	.73
Spray (2,4-D)	Gal.	.13	9.25	1.20	2	.02
Sacks	No.	14	.27	3.78	16	.60
Total materials						9.36

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	8.00	8.00	8	.64
Hauling	Cwt.	12.5	.10	1.25	17	.21
Total contract work						.85

Man labor, power, and machinery used by operation in producing and harvesting dry field peas, area III-B1, southeastern Washington and northern Idaho, 1948

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Fertilize, spreader	10-foot	1.0	0.40	0.10	5	0.02	0.01
Disk	11-foot	1.0	.31	.31	49	.16	.15
Plow, moldboard	4-16 inch	1.0	.58	.56	97	.56	.54
Plow, disk	10-foot	1.0	.33	.33	4	.01	.01
Harrow, springtooth	20-foot	1.8	.21	.21	61	.23	.22
Weed, rod weeder	24-foot	1.0	.23	.23	35	.08	.08
Disk and harrow	30-foot	1.0	.67	.67	2	.01	.01
Harrow, spiketooth	45-foot	3.0	.09	.09	87	.24	.23
Cultivate, duckfoot	13-foot	1.8	.26	.25	11	.05	.05
Harrow and rod weed	24-foot	1.0	.30	.30	5	.01	.01
Seed, drill	20-foot	1.0	.22	.18	98	.22	.18
Drill, springtooth, and pack	11-foot	1.0	.88	.44	2	.02	.01
Harrow and pack	34-foot	1.0	.15	.15	15	.02	.02
Roll	26-foot	1.0	.15	.15	61	.09	.09
Dust	30-foot	1.0	.44	.33	33	.15	.11
Hoe by hand	---	1.0	2.00	---	2	.04	---
Spray, hand	---	1.0	2.00	---	2	.04	---
Total preharvest						1.95	1.72
Combine	12-foot	1.0	1.27	.51	92	1.17	.47
Combine, contract	12-foot	1.0	1.27	.51	8	.10	.04
Haul, truck	1½-ton	1.0	.72	.72	83	.60	---
Haul, contract, t.	1½-ton	1.0	.72	.72	17	.12	---
Total harvest						1.99	.51
Total 1/						3.94	2.23

1/ In addition, truck use averaged 0.72 hour an acre.

POTATOES (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A1, 1949

The data presented here are based on a survey made in 1950 of 34 farms producing irrigated potatoes. These farms are located in type-of-farming area I-A1, a fruit and mixed-farming area in the Yakima River Valley of central Washington.

The farms surveyed averaged about 174 acres per farm. Cropland comprised about 147 acres. In 1949, 30 acres were in irrigated potatoes, and the yield averaged approximately 507 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 10 to 31; the most common was about 20.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	12.6	4.90	61.74	100	61.74
Manure	Ton	11	1/ 2.00	22.00	6	1.32
Mixed fertilizer (16-20-0)	Cwt.	3.10	3.75	11.62	60	6.97
Mixed fertilizer	Cwt.	3.90	3.30	12.87	36	4.63
Nitrate fertilizer (33-0-0)	Cwt.	2.55	3.90	9.94	14	1.39
Phosphate fertilizer(0-43-0)	Cwt.	1.85	3.30	6.10	5	.30
Dust (DDT)	Acre	2/ 3.2	1.75	5.60	99	5.54
Sacks	No.	58	.17	9.86	93	9.17
Water	Acre	1.0	6.50	6.50	100	6.50
Total materials						97.56

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Dusting	Acre	2/ 2.5	1.85	4.62	86	3.97
Rotobeating	Acre	1.0	5.50	5.50	6	.33
Digging	Acre	1.0	12.75	12.75	7	.89
Picking	Cwt.	304	.15	45.60	99	45.14
Hauling	Cwt.	304	.10	30.40	56	17.02
Total contract work						67.35

1/ Estimated.

2/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting potatoes, irrigated, area I-A1, central Washington, 1949

Operation	Size of equipment	Times over	Time per acre: once over Man	Time per acre: once over Power	Acreage covered	Average time per acre - all farms Man	Average time per acre - all farms Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	6.51	1.94	3	0.20	0.06
Apply manure, loader-sp.	---	1.0	3.93	3.71	3	.12	.11
Fertilize, spreader	10-foot	1.0	.62	.55	37	.23	.20
Plow, moldboard	1-18 inch	1.0	2.02	1.93	21	.42	.41
Plow, moldboard	2-16 inch	1.0	1.30	1.24	46	.60	.57
Plow, moldboard	3-16 inch	1.0	.74	.70	33	.24	.23
Disk, tandem	6-foot	2.0	.75	.71	35	.52	.50
Disk, tandem	8-foot	2.4	.62	.59	51	.76	.72
Chisel	8-foot	1.2	.59	.57	16	.11	.11
Harrow, springtooth	8-foot	3.3	.62	.57	38	.78	.71
Harrow, spiketooth	12-foot	2.2	.36	.33	25	.20	.18
Harrow, spiketooth	20-foot	3.0	.22	.20	43	.28	.26
Float, wood	10-foot	1.2	.55	.52	30	.20	.19
Level, steel	9-foot	1.1	.44	.42	37	.18	.17
Plant	2-row	1.0	5.90	2.60	100	5.90	2.60
Harrow, spiketooth	12-foot	1.8	.28	.25	39	.20	.18
Harrow, spiketooth	20-foot	2.4	.22	.20	14	.07	.07
Weed, weeder	15-foot	2.0	.25	.23	22	.11	.10
Corrugate	3-row	1.5	.73	.67	17	.19	.17
Cultivate	2-row	3.2	1.02	.93	100	3.26	2.98
Irrigate	---	14.6	2.01	---	100	29.35	---
Hoe by hand	---	1.0	5.91	---	10	.59	---
Dust	6-row	2.0	.32	.28	50	.32	.28
Dust, plane, contract	---	2.5	---	---	86	---	---
Total preharvest						44.83	10.80
Rotobeat	2-row	1.0	1.44	1.31	3	.04	.04
Rotobeat, contract	2-row	1.0	1.44	1.31	6	.09	.08
Dig	1-row	1.0	6.71	3.45	39	2.62	1.35
Dig	2-row	1.0	7.51	3.13	54	4.06	1.69
Dig, contract	2-row	1.0	7.51	3.13	7	.53	.22
Pick	---	1.0	33.19	---	1	.33	---
Pick, contract	---	1.0	33.19	---	99	32.86	---
Haul, truck	---	1.0	13.62	4.77	44	5.99	---
Haul, truck, contract	---	1.0	13.62	4.77	56	7.63	---
Total harvest						54.15	3.38
Total 1/						98.98	14.18

1/ In addition, truck use averaged 4.77 hours an acre.

POTATOES (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A5, 1952

The data presented here are based on a survey made in 1952 of approximately 20 farms producing potatoes under irrigation in 1952 in west central Colorado. These farms are located in type-of-farming area I-A5 which is comprised of comparatively small irrigated valleys at the foot of the Rocky Mountains in west central Colorado. Fruit and mixed farming predominates in this area. The farms are comparatively small units but are intensively operated.

The farms surveyed averaged about 92 acres per farm. In 1952, approximately 78 acres were in crops including 8.5 in potatoes. The average yield of potatoes was about 205 hundredweight an acre. Potato production in this area is somewhat specialized and is restricted mostly to small localities.

Tractors and motorized equipment provided most of the power used on these farms, although horses were used for some operations. The drawbar-horsepower rating of the tractors ranged from 13 to 26; the most common was about 19.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Lb.	1,500	0.06	90.00	100	90.00
Manure	Ton	10	1/2.00	20.00	18	3.60
Mixed fertilizer (7-21-7)	Cwt.	3.00	4.10	12.30	31	3.81
Nitrate fertilizer (82-0-0)	Cwt.	.60	13.85	8.31	15	1.25
Phosphate fertilizer (0-43-0)	Cwt.	1.00	3.85	3.85	8	.31
Spray (50% DDT) 2/	Lb.	3.0	.52	1.56	97	1.51
Water	Acre	1.0	1.75	1.75	100	1.75
Sacks	No.	150	.20	30.00	30	9.00
Total materials						111.23

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Cutting seed	Cwt.	15	.40	6.00	80	4.80
Spraying 3/	Acre	1.3	1.25	1.62	17	.28
Picking	Cwt.	205	.14	28.70	83	23.82
Hauling	Cwt.	205	.10	20.50	12	2.46
Total contract work						31.36

1/ Estimated. 2/ Nearly 90 percent of the farmers reported spraying with about 3 pounds of 50% DDT. About 2 percent reported using 30 pounds of 10 percent DDT dust. Occasionally lead or copper dust was mixed in equal proportions with DDT. 3/ One acre times average number times over.

Man labor, power, and machinery used by operation in producing and harvesting potatoes, irrigated, area I-A5, west central Colorado, 1952

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor	Average time per acre - all farms: Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	5.50	5.50	18	0.99	0.99	---
Plow, moldboard	1-16 inch	1.0	2.55	2.44	100	2.55	2.44	---
Harrow, spiketooth	10-foot	2.0	.44	.40	42	.37	.34	---
Harrow, spiketooth, h.	10-foot	2.7	1.07	2.05	27	.78	---	1.50
Disk, tandem	7-foot	1.8	.67	.64	76	.92	.87	---
Level	8-foot	2.0	.62	.59	71	.88	.84	---
Level, horses	7-foot	2.0	1.51	3.45	15	.45	---	1.04
Corrugate	2-row	1.0	.90	.82	50	.45	.41	---
Corrugate	3-row	1.0	.61	.56	25	.15	.14	---
Corrugate, horses	2-row	1.0	1.24	2.16	15	.19	---	.32
Ditch	---	1.0	.24	.22	85	.20	.19	---
Irrigate	---	1.0	3.80	---	90	3.42	---	---
Fertilize	10-foot	1.0	.42	.37	30	.13	.11	---
Harrow	10-foot	1.0	.44	.40	90	.40	.36	---
Cut seed	---	1.0	10.00	---	20	2.00	---	---
Cut seed, contract	---	1.0	10.00	---	80	8.00	---	---
Plant	2-row	1.0	4.92	2.17	90	4.43	1.95	---
Plant, horses	2-row	1.0	5.55	4.44	10	.56	---	.44
Cultivate	2-row	3.3	1.21	1.10	91	3.63	3.30	---
Cultivate, horses	2-row	4.0	2.30	4.00	9	.83	---	1.44
Irrigate	---	8.0	4.05	---	100	32.40	---	---
Spray	24-foot	1.3	.30	.26	80	.31	.27	---
Spray, contract	24-foot	1.3	.30	.26	17	.07	.06	---
Weed by hand	---	1.0	4.20	---	50	2.10	---	---
Total preharvest						66.21	12.27	4.74
Dig	1-row	1.0	5.71	5.00	100	5.71	5.00	---
Pick	---	1.0	22.00	---	17	3.74	---	---
Pick, contract	---	1.0	22.00	---	83	18.26	---	---
Haul, truck	1½-ton	1.0	10.58	3.71	88	9.31	---	---
Haul, truck, contract	1½-ton	1.0	10.58	3.71	12	1.27	---	---
Total harvest						38.29	5.00	---
Total 1/						104.50	17.27	4.74

1/ In addition, truck use averaged 3.71 hours an acre.

POTATOES (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D1, 1950

The data presented here are based on a survey made in 1950 of approximately 35 farms producing potatoes under irrigation in 1950. These farms are located in type-of-farming area VI-D1, a general farming area in the irrigated valleys of southeastern Idaho and central Utah. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 113 acres per farm. Cropland comprised about 72 acres. In 1950, approximately 11 acres were in potatoes, and the average yield was about 306 bushels per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 22; the most common was about 15.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	10.20	4.00	40.00	100	40.00
Manure	Ton	14	1/ 2.00	28.00	43	12.04
Mixed fertilizer	Cwt.	2.10	3.60	7.56	46	3.48
Sacks	No.	12	.10	1.20	63	.76
Water	Acre	1.0	2.90	2.90	100	2.90
Total materials						59.18

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Cutting seed	Cwt.	10.20	.40	4.08	60	2.45
Picking	Cwt.	184	.12	22.08	64	14.13
Hauling	Cwt.	184	.09	16.56	5	.83
Total contract work						17.41

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting potatoes, irrigated, area VI-D1, southeastern Idaho and central Utah, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	5.00	3.58	36	1.80	1.29	---
Apply manure, horses-sp.	60-bu.	1.0	4.60	7.40	7	.32	---	0.52
Plow, moldboard	2-16 inch	1.0	1.54	1.47	49	.75	.72	---
Plow, moldboard	2-14 inch	1.0	1.70	1.62	34	.58	.55	---
Plow, moldboard	1-16 inch	1.0	2.66	2.53	16	.43	.40	---
Plow, moldboard, horses	1-14 inch	1.0	6.50	18.40	1	.06	---	.18
Disk, tandem	8-foot	1.4	.57	.55	55	.44	.42	---
Harrow, spiketooth	10-foot	2.2	.54	.49	57	.68	.62	---
Harrow, spiketooth, h.	10-foot	3.0	1.20	3.30	21	.08	---	2.08
Level	9-foot	1.4	.69	.66	50	.48	.46	---
Level, horses	8-foot	1.0	1.31	3.60	1	.01	---	.04
Cultivate	8-foot	1.0	.58	.52	25	.14	.13	---
Irrigate	---	1.0	1.78	---	23	.41	---	---
Cut seed	---	1.0	5.35	---	34	1.82	---	---
Cut seed, contract	---	1.0	5.35	---	60	3.21	---	---
Plant	2-row	1.0	1.68	1.13	90	1.51	1.02	---
Plant, horses	1-row	1.0	5.71	7.14	9	.51	---	.64
Plant, hand drop, h.	---	1.0	23.40	13.65	1	.23	---	.14
Harrow, spiketooth	10-foot	1.3	.60	.55	42	.32	.30	---
Harrow, spiketooth, h.	10-foot	1.3	1.10	3.06	18	.26	---	.72
Cultivate	2-row	5.4	.83	.75	78	3.49	3.16	---
Cultivate, horses	1-row	4.7	2.61	4.50	22	2.70	---	4.65
Fertilize, spreader	2-row	1.0	.90	.78	24	.22	.19	---
Irrigate	---	6.8	1.50	---	100	10.20	---	---
Hoe and weed by hand	---	1.3	3.10	---	51	2.06	---	---
Ditch	---	1.0	.86	.76	62	.53	.47	---
Ditch, horses	---	1.0	2.08	2.00	12	.25	---	.24
Ditch by hand	---	1.0	1.53	---	12	.18	---	---
Total preharvest						33.67	9.73	9.21
Remove vines	2-row	1.0	.86	.79	38	.33	.30	---
Dig	1-row	1.0	4.15	2.86	96	3.98	2.75	---
Dig, horses	1-row	1.0	8.53	22.40	4	.34	---	.90
Pick up by hand	---	1.0	20.58	---	36	7.41	---	---
Pick up by hand, contract	---	1.0	20.58	---	64	13.17	---	---
Haul, truck	1½-ton	1.0	5.93	2.96	93	5.51	---	---
Haul from field, horses	---	1.0	14.41	18.33	2	.29	---	.37
Haul, truck, contract	1½-ton	1.0	5.93	2.96	5	.30	---	---
Total harvest						31.33	3.05	1.27
Total 1/						65.00	12.78	10.48

1/ In addition truck use averaged 2.90 hours an acre.

POTATOES (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D3, 1950

The data presented here are based on a survey made in 1951 of 36 farms producing potatoes under irrigation. These farms are located in type-of-farming area VI-D3, a general farming area in the San Luis Valley in south central Colorado. The particular farms surveyed are quite diversified, producing livestock, hay, small grains, and potatoes.

The farms surveyed averaged about 358 acres per farm. Cropland comprised about 285 acres. In 1950, 45 acres were in potatoes, and the yield averaged about 254 hundredweight per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 11 to 44; the most common was about 22.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Cwt.	18.65	2.60	48.49	63	30.55
Purchased seed	Cwt.	18.65	3.45	64.34	37	23.81
Manure	Ton	5	1/ 2.00	10.00	8	.80
Mixed fertilizer (10-16-8)	Cwt.	3.25	3.65	11.86	54	6.40
Mixed fertilizer	Cwt.	2.40	3.90	9.36	43	4.02
Spray	Lb.	5.0	.54	2.70	36	.97
Dust	Lb.	42.0	.07	2.94	61	1.79
Water, ditch	Acre	1.0	1.30	1.30	100	1.30
Water, pump	Acre	1.0	3.60	3.60	89	3.20
Sacks, picking	No.	118	.14	16.52	60	9.91
Total materials						82.75

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Subsoiling	Acre	1.0	5.70	5.70	16	.91
Dusting (plane) 2/	Acre	1.0	3.50	3.50	38	1.33
Hand picking and sacking	Cwt.	254	.15	38.10	94	35.81
Loading and hauling	Cwt.	254	.08	20.32	72	14.63
Total contract work						52.68

1/ Estimated.

2/ Cost includes dusting material.

Man labor, power, and machinery used by operation in producing and harvesting potatoes, irrigated, area VI-D3, south central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	60-bu.	1.0	1.17	1.17	8	0.09	0.09
Subsoil	3-30 inch	1.0	1.53	1.46	19	.29	.28
Subsoil, contract	3-30 inch	1.0	.95	.90	16	.15	.14
Plow, moldboard	2-16 inch	1.0	1.31	1.25	88	1.15	1.10
Plow, Graham	8-foot	1.0	.66	.63	17	.11	.11
Disk, tandem	8-foot	1.2	.65	.62	52	.41	.38
Irrigate	---	1.0	.76	---	85	.65	---
Harrow, springtooth	10-foot	1.1	.31	.28	10	.03	.03
Harrow, spiketooth	15-foot	1.1	.23	.21	30	.08	.07
Landplane	10-foot	2.0	.33	.32	14	.09	.09
Level	9-foot	1.8	.42	.40	48	.36	.29
Level, wooden	10-foot	1.2	.45	.43	19	.10	.10
Plant	2-row	1.0	1.59	1.40	100	1.59	1.40
Harrow, spiketooth	15-foot	1.0	.21	.19	8	.02	.02
Ditch	6-foot	1.0	.16	.14	61	.10	.09
Dike	2-disk	1.0	.13	.12	29	.04	.03
Irrigate	---	6.2	1.08	---	100	6.70	---
Cultivate	2-row	1.8	.77	.70	100	1.39	1.26
Chisel	2-row	1.0	.65	.62	24	.16	.15
Hill-up	2-row	1.1	.66	.63	47	.34	.32
Dust	8-row	1.7	.14	.13	61	.15	.13
Dust, plane, contract	---	1.0	---	---	38	---	---
Spray	6-row	1.6	.43	.38	36	.25	.22
Weed and rogue	---	1.0	2.24	---	11	.25	---
Total preharvest						14.50	6.30
Rotobeat	2-row	1.0	.55	.50	71	.39	.36
Dig	1-row	1.0	1.70	1.49	32	.54	.48
Dig	2-row	1.0	1.30	1.13	62	.81	.70
Haul, pick and sack, contract	---	1.0	34.08	---	94	33.06	---
Mechanical harvest	1-row	1.0	19.68	2.43	6	1.18	.15
Load and haul, truck	1½-ton	1.0	8.18	3.58	28	2.29	---
Load and haul, truck, contract	1½-ton	1.0	6.72	2.94	72	4.84	---
Total harvest						43.11	1.69
Total 1/						57.61	7.99

1/ In addition, truck use averaged 3.12 hours an acre.

Note: c. = operation performed on contract basis.

POTATOES (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of nine farms producing potatoes under irrigation. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in southeastern Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms surveyed averaged about 332 acres per farm. Cropland comprised about 296 acres. In 1950, 31 acres were in potatoes, and the yield averaged about 175 hundredweight per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 9 to 31; the most common was about 21.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed potatoes	Cwt.	17.00	3.45	58.65	100	58.65
Manure	Ton	14	1/ 2.00	28.00	13	3.64
Mixed fertilizer (10-16-8)	Cwt.	3.60	3.60	12.96	21	2.72
Mixed fertilizer (other)	Cwt.	3.95	3.80	15.01	79	11.86
Dust	Lb.	77.0	.08	6.16	99	6.10
Water, ditch	Acre	1.0	2.10	2.10	100	2.10
Water, pump	Acre	1.0	3.50	3.50	25	.88
Sacks, picking	No.	150	.14	21.00	30	6.30
Baskets, picking	No.	.5	3.00	1.50	15	.22
Total materials						92.47

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Dusting, airplane 2/	Acre	3/ 1.7	4.80	8.16	57	4.65
Picking	Cwt.	175	.12	21.00	100	21.00
Total contract work						25.65

1/ Estimated.

2/ Cost includes dusting material.

3/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting potatoes, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, ldr.-sp.	70-bu.	1.0	5.02	4.39	13	0.65	0.57
Fertilize, spreader	2-row	1.0	1.20	1.05	43	.52	.45
Plow, moldboard	2-14 inch	1.0	1.32	1.26	100	1.32	1.26
Disk, tandem	8-foot	2.0	.52	.49	50	.52	.49
Harrow, springtooth	8-foot	1.3	.66	.60	32	.28	.25
Harrow, spiketooth	15-foot	2.0	.23	.21	93	.43	.39
Roll	8-foot	1.5	.60	.55	82	.74	.67
Level	9-foot	2.5	.53	.50	93	1.23	1.16
Ditch	6-foot	1.0	.11	.10	9	.01	.01
Irrigate	---	1.0	1.65	---	56	.92	---
Corrugate	2-row	1.0	.76	.69	48	.36	.33
Cut seed potatoes	---	1.0	5.36	---	8	.43	---
Haul to planter, truck	---	1.0	.47	.30	44	.21	---
Plant	2-row	1.0	3.20	1.56	100	3.20	1.56
Hoe by hand	---	1.2	3.71	---	19	.85	---
Cultivate	2-row	3.4	.72	.66	100	2.45	2.24
Irrigate	---	5.9	1.39	---	100	8.20	---
Dust	4-row	2.7	.43	.38	36	.42	.37
Dust	8-row	2.5	.22	.19	63	.35	.30
Dust, airplane	---	1.7	---	---	57	---	---
Total preharvest						23.09	10.05
Rotobeat	2-row	1.0	.92	.58	32	.29	.19
Dig	1-row	1.0	3.08	2.25	100	3.08	2.25
Pick, contract	---	1.0	35.68	---	100	35.68	---
Haul, truck	---	1.0	12.44	4.97	100	12.44	---
Total harvest						51.49	2.44
Total 1/						74.62	12.52

1/ In addition, truck use averaged 5.10 hours an acre.

POTATOES (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, OREGON, 1950

The data presented here are based on a survey made in 1951 of approximately 25 farms producing potatoes under irrigation in central Oregon. These farms are located in type-of-farming area VI-D7, an area composed of irrigated valleys scattered throughout the western Mountain region. Livestock and specialized irrigated crops are the most important enterprises in these valleys.

The farms surveyed averaged about 140 acres per farm. Cropland comprised about 98 acres. In 1950, 16 acres were in potatoes and the yield averaged 214 hundredweight per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 7 to 27; the most common was about 17.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Cwt.	11.3	2.00	22.60	74	16.72
Purchased seed	Cwt.	11.3	2.65	29.94	26	7.78
Seed treat	Cwt.	11.3	.03	.34	31	.11
Mixed fertilizer(10-16-8)	Cwt.	7.35	4.05	29.77	46	13.69
Mixed fertilizer	Cwt.	5.95	3.60	21.42	78	16.71
Gypsum	Cwt.	3.10	.90	2.79	30	.84
Sulphur	Cwt.	1.00	2.25	2.25	7	.16
Dust	Lb.	33.2	.10	3.32	61	2.03
Water	Acre	1.0	3.60	3.60	100	3.60
Sacks	No.	72.0	.26	18.72	24	4.49
Total materials						66.13

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Cutting seed	Cwt.	11.3	.31	3.50	21	.74
Dusting	Acre	1/ 1.5	1.90	2.85	35	1.00
Picking	Cwt.	214	.10	21.40	96	20.54
Hauling	Cwt.	214	.09	19.26	43	8.28
Total contract work						30.56

1/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting potatoes, irrigated, area VI-D7, central Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Haul rocks	---	1.0	2.35	1.78	18	0.42	0.32
Fertilize, spreader	10-foot	1.1	.54	.47	25	.15	.13
Plow, moldboard	1-16 inch	1.0	2.53	2.42	43	1.09	1.04
Plow, moldboard	2-16 inch	1.0	1.48	1.42	57	.84	.81
Disk, tandem	5-foot	4.0	.89	.85	16	.57	.54
Disk, tandem	8-foot	1.9	.59	.58	70	.78	.77
Harrow, springtooth	8-foot	2.0	.63	.58	13	.16	.15
Harrow, spiketooth	10-foot	2.4	.44	.40	41	.43	.39
Harrow, spiketooth	15-foot	1.9	.29	.26	36	.20	.18
Corrugate	8-foot	1.0	.58	.52	20	.12	.10
Irrigate	---	1.1	1.10	---	57	.69	---
Level	8-foot	1.5	.65	.62	63	.62	.59
Cut seed	---	1.0	7.01	---	42	2.94	---
Cut seed, contract	---	1.0	7.01	---	21	1.47	---
Treat seed	---	1.0	2.00	---	15	.30	---
Plant	2-row	1.0	2.72	1.33	100	2.72	1.33
Cultivate	2-row	3.7	1.01	.92	100	3.74	3.40
Irrigate	---	9.4	.71	---	100	6.67	---
Dust	6-row	2.7	.47	.41	26	.33	.29
Dust, airplane, contract	---	1.5	---	---	35	---	---
Weed by hand	---	1.0	2.10	---	5	.10	---
Total preharvest						24.34	10.04
Rotobeat	2-row	1.0	.62	.57	4	.02	.02
Dig	1-row	1.0	3.04	2.22	78	2.37	1.73
Dig	2-row	1.0	1.63	1.43	22	.36	.31
Pick up, mechanical	---	1.0	24.00	4.60	4	.96	.18
Pick up, contract	---	1.0	27.59	---	96	26.49	---
Haul potatoes, truck	1½-ton	1.0	3.08	2.70	57	1.76	---
Haul potatoes, contract	---	1.0	1.75	1.53	43	.75	---
Total harvest						32.71	2.24
Total 1/						57.05	12.28

1/ Truck use averaged 2.20 hours an acre.

RICE (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A3, 1949

The data presented here are based on a survey made in 1950 of 21 farms producing rice in north central California. These farms are located in the rice-and grain-producing portions of type-of-farming area I-A3, a fruit and mixed-farming area in the Sacramento Valley.

The farms surveyed averaged about 1,110 acres. Cropland comprised about 1,062 acres. In 1949, 412 acres were in rice, and the yield per acre averaged approximately 4,335 pounds of paddy rice.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 19 to 99; the most common was about 43.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Cwt.	1.4	4.80	6.72	76	5.11
Purchased seed	Cwt.	1.4	5.20	7.28	24	1.75
Cleaning seed	Cwt.	1.4	.25	.35	70	.24
Nitrate fertilizer	Cwt.	2.10	2.80	5.88	66	3.88
Spray (2,4-D)	Pt.	1.6	.67	1.07	30	.32
Dust, copper sulphate	Lb.	9.5	.10	.95	32	.30
Water	Acre	1.0	10.80	10.80	100	10.80
Sacks	No.	40	.23	9.20	26	2.39
Sack strings	No.	40	.01	.40	26	.10
Total materials						24.89

CONTRACT WORK HIRED

Surveying	Acre	1.0	.75	.75	27	.20
Soaking seed	Cwt.	1.4	.15	.21	24	.05
Seeding	Acre	1.0	1.30	1.30	96	1.25
Fertilizing 1/	Cwt.	1.4	.75	1.05	56	.59
Spraying	Acre	1.0	1.20	1.20	30	.36
Dusting	Acre	1.0	.75	.75	25	.19
Combining	Cwt.	43.3	.40	17.32	4	.69
Bank out	Cwt.	43.3	.05	2.16	29	.63
Hauling	Ton	2.2	1.90	4.18	40	1.67
Total contract work						5.63

1/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting rice, irrigated, area I-A3, north central California, 1949

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	5-14 inch	1.0	0.68	0.65	81	0.55	0.53
Disk, tandem	10-foot	1.3	.42	.40	38	.21	.20
Harrow, spiketooth	25-foot	2.1	.17	.16	56	.20	.19
Float, wooden	10-foot	1.0	.33	.31	17	.06	.05
Float, steel	16-foot	1.1	.26	.25	44	.13	.12
Landplane	12-foot	1.8	.37	.36	37	.25	.24
Survey	---	1.0	.26	---	38	.10	---
Survey, contract	---	1.0	.26	---	27	.07	---
Mark	2-12 inch	1.0	.11	.10	49	.05	.05
Plow levees	5-14 inch	1.0	.09	.08	70	.06	.06
Check, diker	4-foot	1.0	.21	.15	70	.15	.10
Fill barrow pits, grader	12-foot	1.0	.21	.09	40	.08	.04
Fill pits, bulldozer	---	1.0	.04	.04	36	.01	.01
Fertilize, endgate	---	1.0	.39	.18	10	.04	.02
Seed, endgate	---	1.0	.39	.18	4	.02	.01
Put in boxes, truck	---	1.0	.21	.09	68	.14	---
Flood, box, truck	---	1.0	.44	.28	25	.11	---
Flood	---	1.0	.42	---	75	.32	---
Soak seed	---	1.0	.22	---	36	.08	---
Soak seed, contract	---	1.0	.22	---	24	.05	---
Haul seed to plane, truck	---	1.0	.06	.03	86	.05	---
Seed, plane, contract	---	1.0	---	---	96	---	---
Irrigate	---	1.0	1.41	---	100	1.41	---
Flag for plane operations	---	3.0	.04	---	20	.02	---
Fertilize, plane, c.	---	1.0	---	---	56	---	---
Spray, plane, contract	---	1.0	---	---	30	---	---
Dust, plane, contract	---	1.0	---	---	25	---	---
Drain	---	1.0	.20	---	100	.20	---
Total preharvest						4.38	1.64
Combine, bulk	16-foot	1.0	1.62	.75	44	.71	.33
Combine, s.p., bulk	14-foot	1.0	1.10	1.01	30	.33	---
Combine, sacked	16-foot	1.0	3.09	.75	11	.34	.08
Combine, s.p., sacked	14-foot	1.0	2.52	1.01	11	.28	---
Combine, sacked, contract	16-foot	1.0	3.09	.75	4	.12	.03
Bank out	---	1.0	.97	.73	71	.69	.52
Bank out, contract	---	1.0	.97	.73	29	.28	.21
Haul, truck	---	1.0	.83	.63	71	.59	---
Haul, truck, contract	---	1.0	.83	.63	29	.24	---
Total harvest						3.58	2.21
Total 1/						7.96	3.85

1/ In addition, truck use averaged 0.79 hour an acre and self-propelled combines 0.41 hour an acre.

Note: c. = operation performed on contract basis.

RYE: RESOURCES USED IN PRODUCTION, AREA III-C2, 1950

The data presented here are based on a survey made in 1951 of 16 farms producing rye. These farms are located in type-of-farming area III-C2, a wheat and range-livestock area in northeastern Montana and southwestern North Dakota.

The farms surveyed averaged 2,991 acres per farm. Cropland comprised about 547 acres. In 1950, 38 acres were in rye, and the yield averaged about 17 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 14 to 34; the most common was about 22.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.1	1.25	1.38	94	1.30
Purchased seed	Bu.	1.1	1.40	1.54	6	.09
Twine	Lb.	1.4	.27	.38	7	.03
Total materials						1.42

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	3.00	3.00	3	.09
Total contract work						.09

Man labor, power, and machinery used by operation in producing and harvesting rye, area III-C2, northeastern Montana and southwestern North Dakota, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, one-way	8-foot	1.0	0.32	0.30	51	0.16	0.15
Plow, moldboard	3-14 inch	1.0	.76	.72	39	.30	.28
Disk, tandem	9-foot	1.0	.26	.25	26	.07	.06
Harrow, spiketooth	20-foot	2.0	.26	.25	24	.12	.12
Drill	10-foot	1.0	.32	.29	50	.16	.14
Plow, pack & pony drill	4-foot	1.0	.52	.47	39	.20	.18
Disk and drill	10-foot	1.0	.38	.35	11	.04	.04
Total preharvest						1.05	.97
Windrow	12-foot	1.0	.24	.23	69	.17	.16
Combine	9-foot	1.0	.36	.33	90	.32	.30
Combine, contract	6-foot	1.0	.48	.44	3	.01	.01
Haul grain, truck	---	1.0	.30	.16	93	.28	---
Bind	7-foot	1.0	.81	.73	7	.06	.05
Shock by hand	---	1.0	.97	---	7	.07	---
Haul bundles	---	1.0	1.81	1.24	7	.13	.09
Thresh	26-inch	1.0	.56	.49	7	.04	.03
Haul from field, truck	---	1.0	.36	.25	7	.03	---
Total harvest						1.11	.64
Total 1/						2.16	1.61

1/ In addition, truck use averaged 0.17 hour an acre.

SUGAR BEETS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A1, 1949

The data presented here are based on a survey made in 1950 of 24 farms producing sugar beets in irrigated portions of central Washington. These farms are located in type-of-farming area I-A1, a fruit and mixed-farming area in the Yakima River Valley.

The farms surveyed averaged about 163 acres per farm. Cropland comprised about 142 acres. In 1949, 39 acres were in sugar beets, and the yield averaged approximately 25.7 tons per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 10 to 26; the most common was about 19.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	7.0	0.54	3.78	100	3.78
Manure	Ton	14	1/ 2.00	28.00	29	8.13
Mixed fertilizer (16-20-0)	Cwt.	4.20	3.75	15.75	34	5.36
Nitrate fertilizer (33-0-0)	Cwt.	2.90	3.90	11.31	61	6.90
Phosphate fertilizer(0-43-0)	Cwt.	1.30	3.30	4.29	48	2.06
Water	Acre	1.0	5.50	5.50	100	5.50
Total materials						31.72

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Block and thin	Acre	1.0	16.60	16.60	100	16.60
Hoeing	Acre	2/2.3	7.15	16.44	100	16.44
Hand top	Ton	25.7	1.40	35.98	6	2.16
Hand top and load	Ton	25.7	1.95	50.12	49	24.56
Mechanical harvest	Ton	25.7	1.60	41.12	5	2.06
Haul, truck	Ton	25.7	.90	23.13	13	3.01
Total contract work						64.83

1/ Estimated.

2/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting sugar beets, irrigated, area I-A1, central Washington, 1949

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	6.65	2.01	16	1.06	0.32
Apply manure, loader-sp.	---	1.0	4.05	3.85	13	.53	.50
Plow, moldboard	1-16 inch	1.0	2.25	2.15	38	.86	.82
Plow, moldboard	2-16 inch	1.0	1.21	1.15	62	.75	.71
Disk, tandem	6-foot	1.6	.75	.71	56	.67	.64
Disk, tandem	10-foot	1.6	.52	.49	25	.21	.19
Fertilize, drill	10-foot	1.0	.62	.55	72	.45	.40
Harrow, springtooth	12-foot	1.6	.33	.30	52	.28	.25
Harrow, spiketooth	15-foot	3.5	.30	.27	97	1.02	.91
Level, wooden	8-foot	1.5	.64	.61	67	.64	.61
Level, steel	6-foot	1.4	.55	.52	31	.24	.23
Cultipack	10-foot	1.3	.34	.31	62	.27	.25
Plant	4-row	1.0	.98	.82	53	.52	.43
Plant	6-row	1.0	.89	.58	47	.42	.27
Cultipack	10-foot	1.1	.46	.42	25	.13	.11
Weed	10-foot	1.6	.29	.26	11	.05	.05
Block and thin, contract	---	1.0	24.35	---	100	24.35	---
Cultivate	4-row	6.2	1.07	.98	57	3.78	3.47
Cultivate	6-row	6.2	.87	.80	43	2.32	2.13
Ditch	4-row	2.0	.64	.58	13	.17	.15
Ditch, hand	---	2.0	1.75	---	8	.28	---
Irrigate	---	9.0	1.90	---	100	17.10	---
Hoe by hand, contract	---	2.3	7.86	---	100	18.08	---
Total preharvest						74.18	12.44
Rotobeat	4-row	1.0	1.72	1.64	17	.29	.28
Lift	1-row	1.0	3.18	3.05	25	.80	.76
Lift	2-row	1.0	1.68	1.61	30	.50	.48
Top by hand, contract	---	1.0	18.79	---	6	1.13	---
Mechanical load	1-row	1.0	2.40	2.30	6	.14	.14
Top and load, contract	---	1.0	45.15	---	49	22.12	---
Mechanical harvest	1-row	1.0	14.46	4.61	40	5.78	1.84
Mechanical harvest, c.	1-row	1.0	14.46	4.61	5	.72	.23
Haul, truck	1½-ton	1.0	6.54	6.26	87	5.69	---
Haul, truck, contract	1½-ton	1.0	6.54	6.26	13	.85	---
Total harvest						38.02	3.73
Total 1/						112.20	16.17

1/ In addition, truck use averaged 6.26 hours an acre.

Note: c. = operation performed on contract basis.

SUGAR BEETS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of 8 farms producing sugar beets under irrigation in southeastern Colorado. These farms are located in irrigated valleys of the Colorado portion of type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 278 acres per farm. Cropland comprised about 213 acres. In 1950, 35 acres were in sugar beets, and the yield averaged slightly less than 12 tons per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 9 to 27; the most common was about 19.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Lb.	5.3	0.45	2.38	100	2.38
Manure	Ton	16	1/ 2.00	32.00	28	8.96
Nitrate fertilizer (33-0-0)	Cwt.	1.30	4.10	5.33	32	1.71
Phosphate fertilizer(0-45-0)	Cwt.	1.80	3.50	6.30	40	2.52
Water	Acre	1.0	4.75	4.75	100	4.75
Total materials						20.32

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Thinning	Acre	1.0	13.10	13.10	100	13.10
Weeding	Acre	1.0	6.25	6.25	91	5.69
Topping	Ton	12	1.55	18.60	23	4.28
Total contract work						23.07

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting sugar beets, irrigated, area II-B2, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	---	1.0	5.45	4.36	28	1.53	1.22
Plow, moldboard	1-16 inch	1.0	2.45	2.34	71	1.74	1.66
Plow, moldboard	2-14 inch	1.0	1.69	1.62	19	.32	.31
Plow, one-way	8-foot	1.0	.72	.68	4	.03	.03
Disk, tandem	7-foot	1.5	.58	.56	24	.21	.20
Disk, single	15-foot	2.3	.36	.35	10	.08	.08
Topdress	8-foot	1.0	.60	.52	18	.11	.09
Harrow, spiketooth	15-foot	1.8	.33	.30	76	.45	.41
Roll	8-foot	3.0	.55	.50	34	.56	.51
Level	12-foot	2.2	.43	.41	100	.95	.90
Plant	4-row	1.0	.90	.83	80	.72	.66
Plant	6-row	1.0	.65	.59	20	.13	.12
Cultivate	4-row	3.5	1.27	1.16	76	3.37	3.09
Cultivate	6-row	3.5	.85	.78	24	.72	.66
Ditch	5-foot	1.0	.12	.11	13	.02	.01
Corrugate	4-row	2.2	1.07	.98	72	1.69	1.56
Corrugate	6-row	1.5	.84	.77	17	.21	.20
Irrigate	---	5.8	1.43	---	100	8.29	---
Thin by hand, contract	---	1.0	---	---	100	---	---
Machine block	6-row	1.0	2.30	2.10	5	.12	.10
Weed by hand	---	1.0	6.36	---	9	.57	---
Weed by hand, contract	---	1.3	6.36	---	91	7.53	---
Total preharvest 1/						29.35	11.81
Lift	1-row	1.0	4.80	4.60	9	.43	.41
Lift	2-row	1.0	2.53	2.43	14	.35	.34
Top by hand, contract	---	1.0	16.98	---	23	3.91	---
Load by hand	---	1.0	6.11	---	14	.86	---
Mechanical load	1-row	1.0	2.80	2.68	9	.25	.24
Mechanical harvest	1-row	1.0	8.68	2.76	77	6.68	2.13
Haul, truck	---	1.0	7.19	6.25	100	7.19	---
Total harvest						19.67	3.12
Total 2/						49.02	14.93

1/ Excludes thinning done on a contract basis for which no rates were available.

2/ In addition, truck use averaged 6.25 hours per acre.

SUGAR BEETS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D1, 1951

The data presented here are based on a survey made in 1951 of approximately 50 farms producing sugar beets under irrigation in 1951. These farms are located in type-of-farming area VI-D1, a general farming area in the irrigated valleys of southeastern Idaho and central Utah. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 92 acres per farm. Cropland comprised about 72 acres. In 1951, approximately 9 acres were in sugar beets, and the yield averaged 17 tons per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing a few operations. The D.B.H.P. rating of the tractors ranged from 13 to 23; the most common was about 14.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	5	0.55	2.75	100	2.75
Manure	Ton	12	1/ 2.00	24.00	66	15.84
Nitrate fertilizer (21-0-0)	Cwt.	2.00	3.10	6.20	64	3.97
Phosphate fertilizer (0-42-0)	Cwt.	1.75	3.30	5.78	62	3.58
Water	Acre	1.0	2.05	2.05	100	2.05
Total materials						28.19

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Thinning	Acre	1.0	13.75	13.75	100	13.75
Weeding, first	Acre	1.0	5.85	5.85	71	4.15
Weeding, second	Acre	1.0	4.60	4.60	48	2.21
Digging, pulling or lifting	Acre	1.0	3.00	3.00	15	.45
Digging, topping and loading	Ton	17	1.95	33.15	15	4.97
Topping and loading	Ton	17	1.70	28.90	60	17.34
Hauling	Ton	17	1.00	17.00	23	3.91
Total contract work						46.78

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting sugar beets, irrigated, area VI-D1, southeastern Idaho and central Utah, 1951

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor	Average time per acre - all farms: Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, loader-sp.	75-bu.	1.0	6.88	6.05	66	4.54	3.99	---
Fertilize, spreader	10-foot	1.0	.49	.43	59	.29	.25	---
Plow, moldboard	1-16 inch	1.0	2.64	2.52	48	1.27	1.21	---
Plow, moldboard	2-14 inch	1.0	1.80	1.72	23	.41	.40	---
Plow, moldboard	2-16 inch	1.0	1.47	1.41	29	.43	.41	---
Disk, tandem	8-foot	1.3	.76	.69	20	.20	.18	---
Harrow, spiketooth	10-foot	3.1	.55	.50	40	.68	.62	---
Harrow, spiketooth	15-foot	2.5	.32	.29	60	.48	.44	---
Harrow, springtooth	7-foot	1.5	.75	.68	25	.28	.26	---
Level	8-foot	1.9	.65	.62	45	.56	.53	---
Level	10-foot	1.3	.50	.47	50	.32	.31	---
Plant	4-row	1.0	.76	.69	53	.40	.37	---
Plant, horses	4-row	1.0	1.16	2.13	47	.55	---	1.00
Harrow, spiketooth	10-foot	1.5	.55	.50	10	.08	.08	---
Harrow, spiketooth	15-foot	1.5	.32	.29	12	.06	.05	---
Cultivate, first	4-row	1.0	1.12	1.02	56	.63	.57	---
Cultivate, other	4-row	3.8	.78	.71	59	1.75	1.59	---
Cultivate, first, horses	4-row	1.0	1.29	2.46	44	.57	---	1.08
Cultivate, other, horses	4-row	3.5	1.15	2.20	41	1.65	---	3.16
Block	2-row	1.0	1.76	1.61	6	.11	.10	---
Thin by hand, contract	---	1.0	16.00	---	100	16.00	---	---
Weed by hand, first	---	1.0	6.82	---	29	1.98	---	---
Weed by hand, second	---	1.0	4.79	---	22	1.05	---	---
Weed by hand, other	---	1.0	3.68	---	46	1.69	---	---
Weed, first, contract	---	1.0	6.82	---	71	4.84	---	---
Weed, second, contract	---	1.0	4.79	---	48	2.30	---	---
Ditch	---	1.4	1.54	.84	70	1.51	.83	---
Ditch by hand	---	1.0	3.01	---	16	.48	---	---
Irrigate	---	5.8	2.15	---	100	12.47	---	---
Total preharvest						57.58	12.19	5.24
Dig, pull or lift	1-row	1.0	2.68	2.56	30	.80	.77	---
Dig or pull, contract	1-row	1.0	2.68	2.56	15	.40	.38	---
Dig, pull or lift, h.	1-row	1.0	6.37	11.68	40	2.55	---	4.67
Dig, top & load, contract	1-row	1.0	11.35	4.45	15	1.70	.67	---
Top and load	---	1.0	28.00	---	25	7.00	---	---
Top & load, contract	---	1.0	28.00	---	60	16.80	---	---
Haul, truck	1½-ton	1.0	5.83	7.40	77	4.49	---	---
Haul, truck, contract	1½-ton	1.0	5.83	7.40	23	1.34	---	---
Total harvest						35.08	1.82	4.67
Total 1/						92.66	14.01	9.91

1/ In addition truck use averaged 7.40 hours an acre.

SUGAR BEETS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of 34 farms producing sugar beets under irrigation. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in southeastern Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms surveyed averaged about 316 acres per farm. Cropland comprised about 243 acres. In 1950, 38 acres were in sugar beets, and the yield averaged about 13 tons per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 11 to 45; the most common was about 21.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	5.7	0.41	2.34	100	2.34
Manure	Ton	16	1/ 2.00	32.00	28	8.96
Mixed fertilizer	Cwt.	2.20	4.10	9.02	23	2.07
Nitrate fertilizer	Cwt.	1.50	4.20	6.30	52	3.28
Phosphate fertilizer	Cwt.	2.10	3.60	7.56	67	5.07
Water	Acre	1.0	2.54	2.54	100	2.54
Total materials						24.26

CONTRACT WORK HIRED

Thinning by hand	Acre	1.0	13.30	13.30	100	13.30
Hoeing by hand	Acre	2/ 1.9	5.00	9.50	100	9.50
Topping by hand	Ton	13	1.50	19.50	43	8.38
Mechanical harvesting	Ton	13	2.25	29.25	5	1.46
Hauling, truck	Ton	13	1.40	18.20	24	4.37
Total contract work						37.01

1/ Estimated.

2/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting sugar beets, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	70-bu.	1.0	6.73	2.55	9	0.61	0.23
Apply manure, ldr.-sp.	70-bu.	1.0	4.58	4.58	19	.87	.87
Fertilize, drill	8-foot	1.0	.60	.53	24	.14	.13
Fertilize, drill	12-foot	1.4	.38	.34	50	.26	.24
Plow, moldboard	1-16 inch	1.0	2.38	2.27	12	.29	.27
Plow, moldboard	2-14 inch	1.0	1.32	1.26	88	1.16	1.11
Disk, tandem	7-foot	2.0	.63	.60	44	.55	.53
Disk, tandem	10-foot	1.7	.42	.40	33	.23	.22
Harrow, springtooth	10-foot	1.0	.48	.44	26	.12	.11
Harrow, spiketooth	15-foot	2.7	.26	.24	75	.52	.49
Roll	10-foot	2.0	.33	.30	47	.31	.28
Level	10-foot	3.0	.46	.44	37	.51	.49
Level, wooden	10-foot	2.0	.45	.43	11	.10	.09
Level	12-foot	3.0	.43	.41	56	.72	.69
Ditch	5-foot	2.0	.11	.10	29	.06	.06
Irrigate	---	1.0	1.44	---	16	.23	---
Corrugate	6-row	1.6	.47	.43	43	.32	.30
Plant	4-row	1.0	.82	.75	34	.28	.26
Plant	6-row	1.0	.60	.55	66	.40	.36
Irrigate	---	4.7	1.44	---	100	6.77	---
Thin by hand, contract	---	1.0	16.05	---	100	16.05	---
Hoe by hand, contract	---	1.9	6.55	---	100	12.45	---
Cultivate	4-row	5.3	.75	.68	80	3.18	2.88
Cultivate	6-row	4.6	.58	.52	20	.53	.48
Side-dress	4-row	1.0	.72	.63	10	.07	.06
Total preharvest						46.73	10.15
Dig	2-row	1.0	1.75	1.68	43	.75	.72
Furrow for piling	---	1.0	.55	.42	16	.09	.07
Top by hand, contract	---	1.0	22.88	---	43	9.84	---
Load	1-row	1.0	.73	.70	43	.31	.30
Mechanical harvest	1-row	1.0	9.70	3.09	52	5.04	1.61
Mechanical harvest, c.	1-row	1.0	9.70	3.09	5	.48	.15
Haul, truck	1½-ton	1.0	4.01	3.74	76	3.05	---
Haul, truck, contract	1½-ton	1.0	3.45	3.00	24	.83	---
Total harvest						20.39	2.85
Total 1/						67.12	13.00

1/ In addition, truck use averaged 3.56 hours an acre.

Note: c. = operation performed on contract basis.

SUGAR BEETS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F1, 1949

The data presented here are based on a survey made in 1950 of approximately 45 farms producing sugar beets under irrigation in 1949 in north central Wyoming and south central Montana. These farms are located in type-of-farming area IX-F1, a general farming and specialized cropping area in the irrigated valleys along the Big Horn, Shoshone, and Yellowstone Rivers in Montana and Wyoming. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 207 acres per farm. Cropland comprised about 181 acres. In 1949, approximately 34 acres were in sugar beets, and the yield averaged about 14 tons per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 19 to 26; the most common size was about 21.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	5	0.45	2.25	100	2.25
Manure	Ton	10	1/ 2.00	25.00	69	17.25
Mixed fertilizer (10-18-5) 2/	Cwt.	2.40	4.75	11.40	24	2.74
Mixed fertilizer 2/	Cwt.	1.70	3.20	5.44	20	1.09
Nitrate fertilizer (33-0-0) 2/	Cwt.	1.55	4.15	6.43	22	1.41
Nitrate fertilizer (20-0-0) 2/	Cwt.	1.20	2.90	3.48	13	.45
Phosphate fertilizer (0-43-0) 2/	Cwt.	1.55	3.60	5.58	75	4.18
Dust	Lb.	20	.16	3.20	11	.35
Water	Acre	1.0	3.20	3.20	100	3.20
Total materials						32.92

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Blocking and thinning	Acre	1.0	14.00	14.00	100	14.00
Hoeing and weeding	Acre	3/ 1.7	5.50	9.35	100	9.35
Topping	Ton	14	1.85	25.90	21	5.44
Total contract work						28.79

1/ Estimated.

2/ All farmers growing sugar beets in this area applied fertilizer to sugar beets. The average application of all kinds of fertilizer combined was approximately 260 pounds per acre. About 52 percent was 0-43-0, 14 percent 10-18-5, 12 percent 33-0-0, 8 percent 20-0-0, and 14 percent was comprised of such fertilizers as 47-0-0, 16-20-0, 22-0-0, 18-20-5, etc. The fertilizer was applied as a special operation before planting and as a side-dressing during cultivations.

3/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting sugar beets, irrigated, area IX-F1, north central Wyoming and south central Montana, 1949

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	4.13	4.05	69	2.85	2.79
Fertilize, spreader	10-foot	1.0	.45	.41	31	.14	.13
Plow, moldboard	2-16 inch	1.0	1.42	1.35	35	.50	.47
Plow, moldboard	2-14 inch	1.0	1.62	1.54	29	.47	.45
Plow, moldboard	1-16 inch	1.0	2.36	2.25	36	.85	.81
Disk, tandem	8-foot	1.6	.60	.57	61	.59	.56
Harrow, spiketooth	15-foot	2.1	.41	.38	70	.60	.56
Disk and harrow	8-foot	1.3	.60	.58	24	.19	.18
Level	10-foot	2.3	.45	.43	100	1.04	.99
Plant	6-row	1.0	.66	.63	87	.57	.55
Plant	4-row	1.0	1.03	.99	13	.13	.13
Cultipack	10-foot	1.0	.39	.36	20	.08	.07
Harrow, spiketooth	10-foot	1.3	.39	.36	13	.07	.06
Block and thin, contract	---	1.0	16.50	---	100	16.50	---
Hoe and weed, contract	---	1.7	6.41	---	100	10.90	---
Cultivate, first	6-row	1.0	.75	.68	87	.65	.59
Cultivate, second	6-row	1.0	.72	.66	87	.63	.57
Cultivate, other	6-row	3.2	.66	.60	87	1.84	1.67
Cultivate, first	4-row	1.0	1.12	1.02	13	.15	.13
Cultivate, second	4-row	1.0	1.07	.98	13	.14	.13
Cultivate, other	4-row	2.8	.95	.87	13	.35	.32
Irrigate, first	---	1.0	2.71	---	100	2.71	---
Irrigate, second	---	1.0	2.02	---	100	2.02	---
Irrigate, between	---	3.6	1.86	---	100	6.70	---
Irrigate, last	---	1.0	1.96	---	100	1.96	---
Dust	12-row	1.0	.30	.27	11	.03	.03
Ditch	---	1.8	.56	.27	71	.72	.34
Ditch by hand	---	1.5	.51	---	17	.13	---
Total preharvest						53.51	11.53
Dig and pull	2-row	1.0	2.86	2.74	9	.26	.25
Dig and pull	1-row	1.0	3.96	3.80	12	.48	.46
Top by hand, contract	---	1.0	16.60	---	21	3.49	---
Load by machine	---	1.0	3.58	3.43	21	.75	.72
Dig, top and load	1-row	1.0	11.34	4.41	79	8.96	3.48
Haul, truck	1½-ton	1.0	.28	.24	100	.28	---
Total harvest						14.22	4.91
Total 1/						67.73	16.44

1/ In addition, truck use averaged 0.24 hour an acre.

SUGAR BEETS (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F2, 1951

The data presented here are based on a survey made in 1951 of approximately 50 farms producing sugar beets under irrigation in 1951 in southeastern Wyoming and west central Nebraska. These farms are located in type-of-farming area IX-F2, a specialized crop and general farming area along the North Platte and Laramie Rivers. The particular farms surveyed are diversified, producing livestock, hay, corn, small grains, and specialized crops.

The farms averaged about 200 acres per farm. Cropland comprised about 143 acres. In 1951, approximately 31 acres were in sugar beets, and the yield was about 15 tons per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 12 to 27; the most common was about 16.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Lb.	6	0.45	2.70	100	2.70
Manure	Ton	11	1/2.00	22.00	59	12.98
Mixed fertilizer (12 24-0)	Cwt.	1.25	4.15	5.19	10	.52
Nitrate fertilizer (33-0-0)	Cwt.	1.00	4.25	4.25	13	.55
Phosphate fertilizer (0-42-0)	Cwt.	1.25	3.75	4.69	97	4.55
Water	Acre	1.0	2.05	2.05	100	2.05
Total materials						23.35

CONTRACT WORK HIRED

Spraying	Acre	1.0	3.40	3.40	21	.71
Thinning	Acre	1.0	13.50	13.50	68	9.18
Hoeing	Acre	1.0	5.50	5.50	68	3.74
Weeding	Acre	2/1.1	4.00	4.40	20	.88
Topping, hand	Ton	15	1.45	21.75	22	4.78
Hauling	Ton	15	1.30	19.50	4	.78
Total contract work						20.07

1/ Estimated.

2/ One acre times average number of times over.

Man labor, power, and machinery used by operation in producing and harvesting sugar beets, irrigated, area IX-F2, southeastern Wyoming and west central Nebraska, 1951

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	75-bu.	1.0	4.56	4.56	59	2.69	2.69
Fertilize, spreader	10-foot	1.0	.72	.44	45	.32	.20
Plow, moldboard	2-16 inch	1.0	1.26	1.21	54	.68	.65
Plow, moldboard	2-14 inch	1.0	1.50	1.43	33	.50	.47
Plow, moldboard	1-16 inch	1.0	2.42	2.31	13	.31	.30
Disk, tandem	8-foot	1.6	.52	.47	86	.72	.64
Harrow, spiketooth	15-foot	2.0	.32	.29	100	.64	.58
Level	10-foot	1.7	.47	.45	98	.78	.75
Cultipack	10-foot	1.0	.32	.29	18	.06	.05
Plant	4-row	1.0	.72	.66	36	.26	.24
Plant and fertilize	4-row	1.0	.78	.72	32	.25	.23
Plant	6-row	1.0	.49	.45	15	.07	.07
Plant and fertilize	6-row	1.0	.55	.51	17	.09	.09
Weed, rotary hoe	11-foot	1.0	.44	.40	33	.15	.13
Cultivate, first	4-row	1.0	.97	.88	68	.66	.60
Cultivate, other	4-row	2.8	.82	.75	68	1.56	1.43
Cultivate, first	6-row	1.0	.67	.61	32	.21	.20
Cultivate, other	6-row	2.8	.53	.48	32	.47	.43
Block	4-row	1.0	.52	.47	12	.06	.06
Thin by hand	---	1.0	16.04	---	32	5.13	---
Thin by hand, contract	---	1.0	16.04	---	68	10.91	---
Hoe by hand	---	1.0	7.35	---	32	2.35	---
Hoe by hand, contract	---	1.0	7.35	---	68	5.00	---
Spray, contract	12-row	1.0	.36	.27	21	.08	.06
Ditch	---	1.2	.47	.29	89	.50	.31
Ditch by hand	---	1.0	.47	---	15	.07	---
Irrigate, first	---	1.0	3.40	---	100	3.40	---
Irrigate, other	---	4.6	3.15	---	100	14.49	---
Weed by hand	---	1.1	4.67	---	24	1.23	---
Weed by hand, contract	---	1.1	4.67	---	20	1.03	---
Total preharvest						54.67	10.18
Dig, pull or lift	2-row	1.0	2.16	2.07	30	.65	.62
Top by hand	---	1.0	17.32	---	8	1.39	---
Top by hand, contract	---	1.0	17.32	---	22	3.81	---
Pull and top	1-row	1.0	4.02	3.41	29	1.17	.99
Pull, top and load	1-row	1.0	4.48	3.70	41	1.84	1.52
Load by machine	---	1.0	2.24	2.15	59	1.32	1.27
Haul, truck	1½-ton	1.0	5.88	5.15	96	5.64	---
Haul, truck, contract	1½-ton	1.0	5.88	5.15	4	.24	---
Total harvest						16.06	4.40
Total 1/						70.73	14.55

1/ In addition truck use averaged 5.15 hours an acre.

VETCH SEED (COMMON): RESOURCES USED IN PRODUCTION, AREA IV-E1, 1950

The data presented here are based on a survey made in 1950 of approximately 45 farms producing all kinds of vetch seed in the Willamette Valley of western Oregon. These farms are located in type-of-farming area IV-E1, a dairy and mixed-farming area ranging from the Puget Sound area south through the Willamette Valley.

The farms surveyed averaged about 320 acres per farm. Cropland comprised about 247 acres. In 1950, 51 acres were in vetch seed. Common vetch averaged 1,456 pounds per acre field run, and 743 pounds of clean seed.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 11 to 32; the most common was about 21.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Common vetch seed	Lb.	40	0.09	3.60	100	3.60
Oats	Bu.	1.7	1.05	1.78	1/100	1.78
Seed, clean & treat	Acre	1.0	.35	.35	90	.32
Gypsum	Cwt.	1.00	.85	.85	30	.26
Mixed fertilizer	Cwt.	1.50	4.10	6.15	10	.62
Nitrate fertilizer (21-0-0)	Cwt.	1.20	3.20	3.84	6	.23
Nitrate fertilizer (33-0-0)	Cwt.	1.10	4.15	4.56	9	.41
Phosphate fertilizer (0-18-0)	Cwt.	1.50	1.90	2.85	4	.11
Sacks	No.	13	.23	2.99	34	1.02
Sack strings	No.	13	.01	.13	50	.06
Total materials						8.41

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	6.00	6.00	4	.24
Hauling	Cwt.	14.5	.09	1.30	24	.31
Total contract work						.55

1/ Approximately 7 percent of the acreage was seeded without a support crop.

Man labor, power, and machinery used by operation in producing and harvesting common vetch, area IV-E1, western Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-16 inch	1.0	1.14	1.09	10	0.11	0.11
Plow, moldboard	3-14 inch	1.0	.87	.83	28	.24	.23
Plow, moldboard	4-16 inch	1.0	.65	.62	20	.13	.12
Disk, tandem	7-foot	1.3	.49	.47	54	.35	.33
Disk, tandem	10-foot	1.4	.33	.32	28	.13	.13
Spread gypsum	10-foot	1.0	.30	.26	18	.05	.05
Fertilize, spreader	10-foot	1.0	.32	.28	22	.07	.06
Harrow, spiketooth	10-foot	1.5	.36	.33	12	.06	.06
Harrow, spiketooth	15-foot	1.8	.26	.24	11	.05	.05
Harrow, spiketooth	20-foot	1.9	.21	.19	16	.06	.06
Harrow, springtooth	10-foot	1.0	.43	.39	2	.01	.01
Roll	7-foot	1.9	.47	.43	12	.11	.10
Seed, drill	8-foot	1.0	.43	.39	22	.09	.09
Seed, drill	10-foot	1.0	.33	.30	78	.26	.23
Roll	7-foot	1.0	.47	.43	5	.02	.02
Harrow, spiketooth	20-foot	1.0	.20	.18	8	.02	.01
Total preharvest						1.76	1.66
Swath	7-foot	1.0	.54	.49	62	.33	.30
Combine, sacked	6-foot	1.0	2.70	1.24	34	.92	.42
Combine, bulk	6-foot	1.0	1.35	1.24	21	.28	.26
Combine, sacked	12-foot	1.0	1.88	.86	12	.23	.10
Combine, sacked, contract	12-foot	1.0	2.02	.93	4	.08	.04
Combine, s.p., bulk	12-foot	1.0	.88	.80	29	.26	---
Haul, sacked, truck	1½-ton	1.0	.69	.32	26	.18	---
Haul, sacked, contract, t.	1½-ton	1.0	.69	.32	24	.17	---
Haul, bulk, truck	1½-ton	1.0	.31	.28	50	.16	---
Total harvest						2.61	1.12
Total 1/						4.37	2.78

1/ In addition, truck use averaged 0.30 hour an acre and self-propelled combines 0.23 hour an acre.

VETCH SEED (HAIRY): RESOURCES USED IN PRODUCTION, AREA IV-El, 1950

The data presented here are based on a survey made in 1950 of approximately 45 farms producing all kinds of vetch seed in the Willamette Valley of western Oregon. These farms are located in type-of-farming area IV-El, a dairy and mixed-farming area ranging from the Puget Sound area south through the Willamette Valley.

The farms surveyed averaged about 320 acres per farm. Cropland comprised about 247 acres. In 1950, 51 acres were in vetch seed. Hairy vetch averaged 1,094 pounds per acre field run, and 437 pounds of clean seed.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 11 to 32; the most common was about 21.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Hairy vetch seed	Lb.	29	.14	4.06	1/ 100	4.06
Oats	Bu.	1.7	1.05	1.78	2/ 100	1.78
Clean and treat seed	Acre	1.0	.30	.30	92	.28
Gypsum	Cwt.	1.00	.85	.85	18	.15
Mixed fertilizer (10-20-20)	Cwt.	1.00	4.50	4.50	3	.14
Nitrate fertilizer (21-0-0)	Cwt.	1.20	3.20	3.84	4	.15
Nitrate fertilizer (33-0-0)	Cwt.	1.10	4.15	4.56	2	.09
Phosphate fertilizer (0-18-0)	Cwt.	1.50	1.90	2.85	29	.83
Dust (DDT)	Lb.	17	.08	1.36	71	.97
Sacks, replacement	No.	10	.23	2.30	33	.76
Sack strings	No.	10	.01	.10	58	.06
Total materials						9.27

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Dusting	Acre	1.0	1.00	1.00	11	.11
Dusting, airplane	Acre	1.0	1.50	1.50	46	.69
Hauling	Cwt.	10.9	.08	.87	5	.04
Total contract work						.84

1/ Approximately 10 percent of the acreage was volunteer vetch.

2/ Approximately 20 percent was seeded without a support crop.

Man labor, power, and machinery used by operation in producing and harvesting hairy vetch seed, area IV-E1, western Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-16 inch	1.0	1.14	1.09	10	0.11	0.11
Plow, moldboard	3-14 inch	1.0	.87	.83	28	.24	.23
Plow, moldboard	4-16 inch	1.0	.65	.62	20	.13	.12
Disk, tandem	7-foot	1.3	.49	.47	54	.35	.33
Disk, tandem	10-foot	1.4	.33	.32	28	.13	.13
Spread gypsum	10-foot	1.0	.30	.26	18	.05	.05
Fertilize, spreader	10-foot	1.0	.32	.28	22	.07	.06
Harrow, spiketooth	10-foot	1.5	.36	.33	12	.06	.06
Harrow, spiketooth	15-foot	1.8	.26	.24	11	.05	.05
Harrow, spiketooth	20-foot	1.9	.21	.19	16	.06	.06
Harrow, springtooth	10-foot	1.0	.43	.39	2	.01	.01
Roll	7-foot	1.9	.47	.43	12	.11	.10
Seed, drill	8-foot	1.0	.43	.39	22	.09	.09
Seed, drill	10-foot	1.0	.33	.30	78	.26	.23
Roll	7-foot	1.0	.47	.43	5	.02	.02
Harrow, spiketooth	20-foot	1.0	.20	.18	8	.02	.01
Dust	---	1.0	.07	.06	14	.01	.01
Dust, contract	---	1.0	.07	.06	11	.01	.01
Dust, plane, contract	---	---	---	---	46	---	---
Total preharvest						1.78	1.68
Swath	7-foot	1.0	.54	.49	62	.33	.30
Combine, sacked	6-foot	1.0	2.70	1.24	37	1.00	.46
Combine, bulk	6-foot	1.0	1.35	1.24	17	.23	.21
Combine, sacked	12-foot	1.0	1.88	.86	21	.39	.18
Combine, s.p., bulk	12-foot	1.0	.88	.80	25	.22	---
Haul, sacked, truck	1½-ton	1.0	.53	.24	53	.28	---
Haul, sacked, contract, t.	1½-ton	1.0	.53	.24	5	.03	---
Haul, bulk, truck	1½-ton	1.0	.23	.21	42	.10	---
Total harvest						2.58	1.15
Total 1/						4.36	2.83

1/ In addition, truck use averaged 0.33 hour an acre and self-propelled combines 0.20 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A1, 1949

The data presented here are based on a survey made in 1950 of 41 farms producing irrigated wheat. These farms are located in type-of-farming area I-A1, a fruit and mixed-farming area in the Yakima River Valley of central Washington.

The farms surveyed averaged about 154 acres per farm. Cropland comprised about 139 acres. In 1949, 26 acres were in irrigated wheat, and the yield averaged approximately 50 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 10 to 31; the most common was about 19.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.6	2.20	3.52	52	1.83
Purchased seed	Bu.	1.6	2.90	4.64	48	2.23
Manure	Ton	7	1/ 2.00	14.00	5	.70
Spray (2,4-D)	Pt.	1.0	.62	.62	9	.06
Binder twine	Lb.	3.6	.30	1.08	74	.80
Sacks, replacement	No.	23	.17	3.91	23	.90
Sack strings	No.	23	.01	.23	27	.06
Water	Acre	1.0	4.75	4.75	100	4.75
Total materials						11.33

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Dusting 2/	Acre	1.0	6.50	6.50	5	3.25
Spraying	Acre	1.0	1.50	1.50	9	.14
Binding	Acre	1.0	4.50	4.50	27	1.22
Shocking	Acre	1.0	2.50	2.50	26	.65
Threshing	Bu.	50	.15	7.50	33	2.48
Hauling and threshing	Bu.	50	.23	11.50	28	3.22
Combining	Acre	1.0	9.75	9.75	19	1.85
Hauling	Bu.	50	.05	2.50	22	.55
Total contract work						13.36

1/ Estimated.

2/ Cost includes dust materials used.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area I-A1, central Washington, 1950

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	1-ton	1.0	4.73	1.49	5	0.24	0.07
Plow, moldboard	1-16 inch	1.0	2.25	2.15	24	.54	.52
Plow, moldboard	2-16 inch	1.0	1.21	1.15	50	.60	.58
Renovate	8-foot	3.9	.43	.39	21	.35	.32
Disk, tandem	8-foot	1.3	.62	.59	69	.56	.53
Harrow, spiketooth	10-foot	2.2	.38	.35	49	.41	.38
Harrow, spiketooth	20-foot	2.2	.22	.20	30	.14	.13
Float, wooden	8-foot	1.0	.64	.61	58	.37	.35
Float, steel	9-foot	1.0	.44	.42	13	.06	.05
Seed, drill	8-foot	1.0	.63	.58	66	.42	.38
Seed, drill	10-foot	1.0	.53	.48	34	.18	.16
Harrow, spiketooth	10-foot	1.4	.41	.38	12	.07	.06
Roll	10-foot	1.0	.44	.40	11	.05	.04
Corrugate	3-row	1.0	.66	.60	100	.66	.60
Irrigate	---	3.1	.71	---	100	2.20	---
Spray, contract	---	1.0	---	---	9	---	---
Dust, contract	---	1.0	---	---	5	---	---
Total preharvest 1/						6.85	4.17
Swath	8-foot	1.0	.71	.65	16	.11	.10
Combine, self-propelled	7-foot	1.0	1.21	1.12	7	.08	---
Combine, s.p., contract	7-foot	1.0	1.21	1.12	19	.23	---
Haul grain, bulk, truck	---	1.0	.71	.43	19	.13	---
Bind	7-foot	1.0	2.07	.91	47	.97	.43
Bind, contract	8-foot	1.0	1.70	.75	27	.46	.20
Shock by hand	---	1.0	1.92	---	44	.84	---
Shock, contract	---	1.0	1.92	---	26	.50	---
Haul bundles	---	1.0	3.51	1.40	46	1.61	.64
Thresh, contract 2/	---	1.0	6.54	2.51	28	1.83	.70
Thresh	---	1.0	1.98	.73	13	.26	.09
Thresh, contract	---	1.0	1.98	.73	33	.65	.24
Haul grain, bulk, truck	---	1.0	.49	.35	30	.15	---
Haul grain, sacked, t.	---	1.0	.90	.27	17	.15	---
Haul, truck, contract	---	1.0	.49	.35	22	.11	---
Total harvest						8.08	2.40
Total 3/						14.93	6.57

1/ Excludes spraying and dusting done on a contract basis for which no rates were available. 2/ Contractor furnished labor and power for hauling bundles. 3/ In addition, self-propelled combines averaged 0.29 hour an acre and truck use 0.31 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA I-A5, 1952

The data presented here are based on a survey made in 1952 of approximately 40 farms producing wheat under irrigation in 1952 in west central Colorado. These farms are located in type-of-farming area I-A5, which is comprised of comparatively small irrigated valleys at the foot of the Rocky Mountains in west central Colorado. Fruit and mixed farming predominates in this area. The farms are comparatively small units but are intensively operated.

The farms surveyed averaged about 100 acres per farm. In 1952, 85 acres were in crops including 12.5 acres in wheat. The average yield of wheat was about 39 bushels an acre. Most farmers in this area grow small grains in their rotations partly as a supplement to their feeding operations and partly as a nurse crop for new seedings of alfalfa.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 27. Those with drawbar-horsepower ratings of 19 and 26 were most common.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Cwt.	1.25	4.50	5.62	100	5.62
Phosphate fertilizer(0-43-0)	Cwt.	2.00	3.75	7.50	29	2.18
Spray (2, 4-D)	Pt.	2.0	.65	1.30	10	.13
Water	Acre	1.0	3.00	3.00	100	3.00
Twine	Lb.	3.5	.35	1.22	31	.38
Total materials						11.31

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Fertilizing(82-0-0) 1/	Acre	1.0	7.50	7.50	12	.90
Total contract work						.90

1/ Approximately 75 units were applied.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area I-A5, west central Colorado, 1952

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	1-16 inch	1.0	1.99	1.90	37	0.74	0.70
Plow, moldboard	2-16 inch	1.0	1.67	1.60	30	.50	.48
Disk, tandem	7-foot	1.4	.69	.66	84	.81	.77
Harrow, spiketooth	10-foot	1.6	.44	.40	72	.50	.46
Fertilize	8-foot	1.0	.44	.39	16	.07	.06
Level	8-foot	1.4	.74	.70	88	.92	.86
Seed, drill	8-foot	1.0	.61	.56	100	.61	.56
Corrugate	8-foot	1.0	.52	.47	60	.31	.28
Ditch	---	1.0	.24	.22	80	.19	.18
Irrigate	---	3.8	4.15	---	100	15.77	---
Spray	16-foot	1.0	.65	.60	10	.06	.06
Total preharvest						20.48	4.41
Bind	6-foot	1.0	2.11	1.62	31	.65	.50
Shock	---	1.0	1.48	---	10	.15	---
Haul bundles	---	1.0	5.78	.76	27	1.56	.21
Haul bundles, contract	---	1.0	5.78	.76	4	.23	.03
Thresh	---	1.0	1.62	.73	31	.50	.23
Combine	6-foot	1.0	1.30	1.20	52	.68	.62
Combine, self-propelled	12-foot	1.0	.84	.77	17	.14	---
Haul grain, truck	1½-ton	1.0	1.04	.94	80	.83	---
Total harvest						4.74	1.59
Total 1/						25.22	6.00

1/ In addition, truck use averaged 0.75 hour an acre and self-propelled combine 0.13 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-A3, 1950

The data presented here are based on a survey made in 1950 of approximately 35 farms producing wheat under irrigation in 1950 in east central Utah. These farms are located in the irrigated valleys along the Colorado, Strawberry, and Green Rivers in Utah. These valleys comprise comparatively small portions of type-of-farming area II-A3, a seasonal migratory grazing area. The particular farms surveyed are for the most part general farms, producing livestock, corn, and small grains. Some of the farmers operate additional grazing or nonirrigated units in connection with their irrigated land.

The farms surveyed averaged about 177 acres per farm. Cropland comprised about 109 acres. In 1950, approximately 14 acres were in wheat, and the yield averaged 46 bushels per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 25; the most common was about 15.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.10	4.10	4.51	100	4.51
Manure	Ton	12	1/2.00	24.00	11	2.64
Phosphate fertilizer	Cwt.	1.00	3.20	3.20	9	.29
Binder twine	Lb.	3.5	.30	1.05	24	.25
Sack twine	Lb.	.14	.90	.13	52	.07
Sacks	No.	4.5	.30	1.35	69	.93
Water	Acre	1.0	1.80	1.80	100	1.80
Total materials						10.49

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	1.10	.20	.22	37	.08
Combining	Acre	1.0	6.00	6.00	33	1.98
Binding	Acre	1.0	3.25	3.25	9	.29
Threshing	Bu.	46	.12	5.52	24	1.32
Hauling	Bu.	46	.05	2.30	7	.16
Total contract work						3.83

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area II-A3, east central Utah, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	3.05	2.51	9	0.27	0.23	---
Apply manure, horses-sp.	60-bu.	1.0	9.32	10.05	2	.19	---	0.20
Plow, moldboard	2-16 inch	1.0	1.46	1.39	20	.29	.28	---
Plow, moldboard	2-14 inch	1.0	1.60	1.52	48	.77	.73	---
Plow, moldboard	1-16 inch	1.0	2.47	2.35	28	.69	.66	---
Plow, moldboard, horses	1-16 inch	1.0	6.18	16.30	4	.25	---	.65
Disk, tandem	7-foot	1.5	.79	.76	60	.71	.68	---
Fertilize, spreader	10-foot	1.0	.85	.55	9	.08	.05	---
Harrow, spiketooth	10-foot	1.9	.56	.51	70	.74	.68	---
Harrow, spiketooth, h.	10-foot	2.4	1.22	3.39	8	.23	---	.65
Level	8-foot	1.2	.68	.65	57	.47	.44	---
Level, horses	8-foot	1.2	1.40	3.50	7	.12	---	.29
Seed, drill	8-foot	1.0	.62	.55	83	.51	.46	---
Seed, drill, horses	8-foot	1.0	1.09	2.00	17	.19	---	.34
Harrow, spiketooth, h.	10-foot	1.8	1.22	3.39	3	.06	---	.18
Irrigate	---	2.7	2.44	---	100	6.59	---	---
Ditch	---	1.0	1.07	.92	88	.94	.81	---
Ditch, horses	---	1.0	1.81	1.66	12	.22	---	.20
Ditch by hand	---	1.0	.85	---	30	.26	---	---
Total preharvest						13.58	5.02	2.51
Combine	6-foot	1.0	2.02	1.25	43	.87	.54	---
Combine, contract	6-foot	1.0	2.02	1.25	33	.67	.41	---
Bind	6-foot	1.0	2.01	1.25	10	.20	.12	---
Bind, horses	6-foot	1.0	1.90	4.00	5	.10	---	.20
Bind, contract	6-foot	1.0	2.01	1.25	9	.18	.11	---
Shock by hand	---	1.0	1.83	---	8	.15	---	---
Haul bundles	---	1.0	5.31	1.90	24	1.27	.46	---
Thresh, contract	---	1.0	2.40	1.10	24	.58	.26	---
Haul grain, truck	1½-ton	1.0	1.62	.92	78	1.26	---	---
Haul grain, horses	---	1.0	1.54	1.94	3	.05	---	.06
Haul, truck, contract	1½-ton	1.0	1.62	.92	7	.11	---	---
Total harvest						5.44	1.90	.26
Total 1/						19.05	6.92	2.77

1/ In addition, truck use averaged 0.78 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of 11 farms producing wheat under irrigation in southeastern Colorado and northeastern New Mexico. These farms are located in irrigated valleys of type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 460 acres per farm. Cropland comprised about 217 acres. In 1950, 48 acres were planted to irrigated wheat. Due to a severe shortage of water for irrigation in 1950, only about 8 percent of the acreage was harvested. The yield of about 7 bushels per harvested acre was much below the usual yield of 25 to 30 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 11 to 26; the most common was about 18.

Materials used and contract work hired, 1950 1/

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 2/	Bu.	1.2	2.20	2.64	100	2.64
Ceresan	Bu.	1.2	.15	.18	45	.08
Water	Acre	1.0	1.80	1.80	100	1.80
Total materials						4.52

1/ No contract work was reported on farms surveyed in this area.

2/ Approximately 89 percent of the farmers in this area purchased seed wheat.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area II-B2, southeastern Colorado and northeastern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-14 inch	1.0	1.69	1.62	37	0.63	0.60
Plow, Graham	8-foot	2.0	.95	.90	52	.99	.94
Disk, single	7-foot	2.0	.46	.44	40	.37	.35
Disk, tandem	10-foot	1.0	.51	.48	57	.29	.27
Harrow, spiketooth	12-foot	2.1	.37	.34	47	.37	.33
Roll	8-foot	3.0	.58	.52	3	.05	.05
Level, steel	8-foot	1.8	.66	.63	40	.48	.45
Level, wood	14-foot	1.5	.38	.37	60	.34	.34
Seed, drill	8-foot	1.0	.68	.62	35	.24	.22
Seed, drill	14-foot	1.0	.37	.34	65	.24	.22
Corrugate	10-foot	1.0	.41	.38	100	.41	.38
Irrigate	---	1/ 2.6	1.64	---	100	4.26	---
Total preharvest						8.67	4.15
Combine	6-foot	1.0	1.02	.94	2/ 100	1.02	.94
Haul, truck	1½-ton	1.0	.16	.15	2/ 100	.16	---
Total harvest						1.18	.94
Total 3/						9.85	5.09

1/ Usual number of times over when normal amounts of water are applied.

2/ Harvested acreage only. Because of a severe shortage of irrigation water, only 8 percent of the planted acreage was harvested. Operators applied most of the available water to higher-value crops.

3/ In addition, truck use averaged 0.15 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA III-C3, 1950

The data presented here are based on a survey made in 1951 of 14 farms producing wheat, oats, and barley on irrigated land in east central Colorado. These farms are located in the western edge of the Colorado portion of type-of-farming area III-C3, a wheat and range-livestock area in the Central High Plains.

The farms surveyed averaged about 350 acres per farm. Cropland comprised about 309 acres. In 1950, 32 acres were in irrigated wheat and the yield averaged about 47 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 36; the most common was about 22.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.2	1.75	2.10	74	1.55
Purchased seed	Bu.	1.2	2.45	2.94	26	.76
Ceresan	Bu.	1.2	.03	.04	58	.02
Spray (2,4-D)	Pt.	.8	.62	.50	13	.06
Manure	Ton	15	1/ 2.00	30.00	28	8.40
Water	Acre	1.0	1.60	1.60	100	1.60
Twine	Lb.	3.1	.25	.78	32	.25
Total materials						12.64

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	2.40	2.40	3	.07
Combining	Acre	1.0	3.85	3.85	22	.85
Threshing	Bu.	47	.09	4.23	17	.72
Total contract work						1.64

1/ Estimated.

Man labor, power, and machinery used by operation in producing
and harvesting wheat, irrigated, area III-C3,
east central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader, h.	60-bu.	1.0	4.40	8.80	11	0.48	---
Apply manure, spreader	60-bu.	1.5	4.40	4.40	17	1.12	1.12
Plow, moldboard	2-14 inch	1.0	1.09	1.04	52	.57	.54
Plow, moldboard	3-14 inch	1.0	.99	.94	28	.28	.26
Plow, Graham	10-foot	1.0	.30	.28	3	.01	.01
Plow, one-way	10-foot	1.0	.32	.30	17	.05	.05
Harrow, springtooth	12-foot	1.0	.46	.42	10	.05	.04
Harrow, spiketooth	18-foot	2.1	.21	.19	76	.33	.30
Disk, tandem	10-foot	1.3	.53	.50	20	.14	.13
Level, wooden	14-foot	1.5	.46	.44	9	.06	.06
Level	12-foot	1.4	.50	.47	52	.36	.34
Drill	10-foot	1.0	.48	.44	100	.48	.44
Plow for ditches	1-14 inch	1.0	.20	.15	25	.05	.04
Ditch	4-foot	1.0	.20	.19	42	.08	.08
Irrigate	---	1.2	1.20	---	100	1.44	---
Spray	20-foot	1.0	.22	.19	10	.02	.02
Spray, contract	20-foot	1.0	.22	.19	3	.01	.01
Total preharvest						5.53	3.44
Combine	5-foot	1.0	1.15	1.06	29	.33	.31
Combine, self-propelled	14-foot	1.0	.38	.34	17	.06	---
Combine, s.p., contract	12-foot	1.0	.59	.54	22	.13	---
Haul, truck	1½-ton	1.0	.47	.39	68	.32	---
Bind	8-foot	1.0	1.18	.52	32	.38	.17
Shock	---	1.0	1.10	---	15	.17	---
Haul bundles, buckrake	---	1.0	.69	.63	32	.22	.20
Thresh	---	1.0	2.64	.60	15	.40	.09
Thresh, contract	---	1.0	2.64	.60	17	.45	.10
Haul grain, truck	1½-ton	1.0	.90	.82	32	.29	---
Total harvest						2.75	.87
Total 1/						8.28	4.31

1/ In addition, truck use averaged 0.53 hour an acre, self-propelled combine 0.18 hour an acre, and horse work 0.97 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA III-E1, 1952

The data presented here are based on a survey made in 1952 of 45 farms that produced wheat under irrigation in 1952 in central Idaho. These farms are located in type-of-farming area III-E1, which is comprised of a number of rather small valleys in the southern part of Idaho. Usually a relatively small portion of the valleys is under irrigation but a variety of crops is grown on this irrigated land. Wheat is grown almost exclusively on the tillable, nonirrigated land. Some farmers operate both irrigated and nonirrigated lands.

These particular farms are located along Camas Creek, Wood River, and Lost River in central Idaho. The farms average about 250 acres per farm. In 1952, approximately 170 acres were in crops, including 47 in irrigated wheat. The average yield of wheat under irrigation was about 66 bushels an acre. Most of the farmers on the irrigated units grew small grains in their rotations, partly as a supplement to their feeding operations and partly as a nurse crop for new seedings of alfalfa.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 32; the most common was about 19.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Cwt.	1.10	4.50	4.95	100	4.95
Manure	Ton	10	1/2.00	20.00	12	2.40
Nitrate fertilizer(33-0-0)	Cwt.	1.50	5.00	7.50	20	1.50
Spray (2,4-D)	Pt.	1.5	.65	.98	3	.03
Chlordane	Pt.	1.2	1.25	1.50	1	.02
Water	Acre	1.0	1.40	1.40	100	1.40
Total materials						10.30

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	5.00	5.00	9	.45
Total contract work						.45

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area III-El, central Idaho, 1952

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	5.20	5.20	12	0.62	0.62
Plow, moldboard	1-16 inch	1.0	2.28	2.17	20	.46	.43
Plow, moldboard	1-18 inch	1.0	1.98	1.89	18	.36	.34
Plow, moldboard	2-14 inch	1.0	1.50	1.43	62	.93	.89
Disk, tandem	8-foot	1.5	.48	.46	54	.39	.37
Harrow, spiketooth	15-foot	2.3	.34	.32	68	.53	.50
Level	9-foot	2.0	.48	.46	95	.91	.87
Fertilize	10-foot	1.0	.48	.42	8	.04	.04
Spray	12-foot	1.0	.65	.60	4	.03	.02
Cultipack	10-foot	1.0	.34	.32	9	.03	.03
Seed, drill	10-foot	1.0	.54	.49	100	.54	.49
Ditch	---	1.2	.24	.22	75	.22	.20
Dike	---	1.0	.62	.57	9	.06	.05
Irrigate	---	3.3	2.50	---	100	8.25	---
Total preharvest						13.37	4.85
Combine	6-foot	1.0	1.24	1.04	46	.57	.48
Combine, self-propelled	12-foot	1.0	.68	.62	45	.31	---
Combine, s.p., contract	12-foot	1.0	.68	.62	9	.06	---
Haul grain, truck	1½-ton	1.0	.94	.92	97	.91	---
Total harvest						1.85	.48
Total 1/						15.22	5.33

1/ In addition, truck use averaged 0.89 hour an acre and self-propelled combines 0.34 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D1, 1950

The data presented here are based on a survey made in 1950 of approximately 65 farms producing wheat under irrigation in 1950 in southeastern Idaho and central Utah. These farms are located in type-of-farming area VI-D1, a general farming area in the irrigated valleys of southeastern Idaho and central Utah. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms averaged about 205 acres per farm. Cropland comprised about 100 acres. In 1950, approximately 15 acres were in wheat, and the average yield was 51 bushels per acre.

Tractors provide most of the power used on these farms, although horses are still used in performing some operations. The D.B.H.P. rating of the tractors ranged from 13 to 23; the most common was about 16.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.20	3.90	4.68	100	4.68
Manure	Ton	11	1/ 2.00	22.00	26	5.72
Mixed fertilizer	Cwt.	1.65	3.80	6.27	21	1.32
Binder twine	Lb.	3.5	.28	.98	41	.40
Sacks	No.	5	.30	1.50	27	.40
Water	Acre	1.0	2.10	2.10	100	2.10
Total materials						14.62

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating	Cwt.	1.20	.22	.26	81	.21
Combining	Acre	1.0	6.00	6.00	12	.72
Binding	Acre	1.0	3.25	3.25	9	.29
Threshing	Bu.	51	.11	5.61	41	2.30
Trucking	Bu.	51	.06	3.06	16	.49
Total contract work						4.01

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area VI-D1, southeastern Idaho and central Utah, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms		
			Man	Power		Man	Tractor	Horse
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	4.95	4.02	21	1.04	0.84	---
Apply manure, horses-sp.	60-bu.	1.0	7.11	8.58	5	.36	---	0.43
Plow, moldboard	2-16 inch	1.0	1.54	1.47	45	.69	.66	---
Plow, moldboard	2-14 inch	1.0	1.70	1.62	33	.56	.53	---
Plow, moldboard	1-16 inch	1.0	2.48	2.36	3	.07	.07	---
Plow, moldboard, horses	1-14 inch	1.0	6.40	18.10	5	.32	---	.90
Disk, tandem	7-foot	1.1	.68	.65	40	.30	.29	---
Harrow, spiketooth	10-foot	2.1	.56	.51	72	.85	.77	---
Harrow, spiketooth, h.	10-foot	3.1	1.20	3.30	15	.56	---	1.53
Level	8-foot	1.2	.60	.55	57	.41	.38	---
Level, horses	8-foot	1.2	1.30	3.44	11	.17	---	.45
Weed	6-foot	1.0	.85	.77	10	.08	.08	---
Corrugate	8-foot	1.0	.58	.52	18	.10	.09	---
Fertilize, spreader	10-foot	1.0	.82	.51	21	.17	.11	---
Plant	8-foot	1.0	.66	.58	74	.49	.43	---
Plant, horses	7-foot	1.0	1.19	2.09	26	.31	---	.54
Irrigate	---	2.6	1.80	---	100	4.68	---	---
Ditch	---	1.0	.84	.74	51	.43	.38	---
Ditch, horses	---	1.0	1.40	1.32	20	.28	---	.26
Ditch by hand	---	1.0	.87	---	34	.30	---	---
Total preharvest						12.17	4.63	4.11
Combine, self-propelled	12-foot	1.0	.80	.74	17	.14	---	---
Combine	6-foot	1.0	1.45	1.28	30	.44	.38	---
Combine, contract	6-foot	1.0	1.45	1.28	12	.17	.15	---
Bind	6-foot	1.0	1.60	1.45	25	.40	.36	---
Bind, contract	6-foot	1.0	1.60	1.45	9	.14	.13	---
Bind, horses	6-foot	1.0	1.88	3.96	7	.13	---	.28
Shock by hand	---	1.0	1.32	---	20	.26	---	---
Haul bundles	---	1.0	5.50	2.00	41	2.26	.82	---
Thresh, contract	---	1.0	2.40	1.10	41	.98	.45	---
Haul, truck	1½-ton	1.0	1.38	1.16	67	.92	---	---
Haul grain, horses	---	1.0	2.38	3.19	11	.26	---	.35
Haul, truck, contract	1½-ton	1.0	1.38	1.16	16	.22	---	---
Total harvest						6.32	2.29	.63
Total 1/						18.49	6.92	4.74

1/ In addition, self-propelled combine use averaged 0.13 hour an acre and truck use 0.97 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D1, 1951

The data presented here are based on a survey made in 1951 of approximately 42 farms producing wheat under irrigation in 1951 in west central Utah. For the most part these are general farms producing a variety of crops and livestock in comparatively small irrigated areas within the valleys of the Great Basin Region. The areas would be characterized best as type-of-farming areas VI-D1 and VI-D7, which are surrounded largely by grazing areas.

The farms surveyed averaged about 240 acres per farm. In 1951, 155 acres were in crops, including 20 in wheat. The average yield of wheat was about 50 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 13 to 32. There were two common sizes: 14 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	1.8	2.25	4.05	100	4.05
Manure	Ton	12	1/ 2.00	24.00	12	2.88
Fertilizer (33-0-0)	Cwt.	1.25	4.25	5.31	11	.58
Spray (2,4-D)	Pint	.6	.60	.36	15	.05
Water	Acre	1.0	2.15	2.15	100	2.15
Bags	No.	6	.25	1.50	87	1.30
Twine, sack	Lb.	.4	.95	.38	85	.32
Twine, binder	Lb.	3.7	.35	1.30	16	.21
Total materials						11.54

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Bu.	1.8	.15	.27	100	.27
Binding	Acre	1.0	3.00	3.00	3	.09
Threshing	Bu.	50	.13	6.50	16	1.04
Combining	Acre	1.0	5.35	5.35	12	.64
Total contract work						2.04

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area VI-1, west central Utah, 1951

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, loader-sp.	75-bu.	1.0	5.19	3.99	12	0.62	0.48
Plow, moldboard	1-16 inch	1.0	2.20	2.10	37	.81	.78
Plow, moldboard	2-14 inch	1.0	1.32	1.26	35	.46	.44
Plow, disk	6-foot	1.0	.67	.64	11	.07	.07
Disk, tandem	8-foot	1.5	.55	.50	17	.14	.13
Harrow, spiketooth	10-foot	3.2	.46	.42	83	1.22	1.12
Fertilize, spreader	10-foot	1.0	.72	.63	11	.08	.07
Level	8-foot	1.4	.53	.50	66	.49	.46
Seed, drill	8-foot	1.0	.55	.50	100	.55	.50
Ditch	---	1.0	.28	.23	100	.28	.23
Ditch by hand	---	1.0	.84	---	15	.13	---
Corrugate	8-foot	1.0	.36	.33	18	.06	.06
Irrigate	---	2.2	1.70	---	100	3.74	---
Spray	20-foot	1.0	.68	.62	15	.10	.09
Total preharvest						8.75	4.43
Bind	6-foot	1.0	1.56	1.38	13	.20	.18
Bind, contract	6-foot	1.0	1.56	1.38	3	.05	.04
Shock by hand	---	1.0	2.55	---	6	.13	---
Haul to thresher	---	1.0	5.10	.92	16	.82	.15
Thresh, contract	---	1.0	1.20	.55	16	.19	.09
Combine	6-foot	1.0	1.56	1.25	72	1.12	.90
Combine, custom	6-foot	1.0	1.56	1.25	12	.19	.15
Haul, truck	1½-ton	1.0	1.20	.85	100	1.20	---
Total harvest						3.90	1.51
Total 1/						12.65	5.94

1/ In addition truck use averaged 0.85 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D3, 1950

The data presented here are based on a survey made in 1951 of 21 farms producing spring wheat under irrigation in 1950. These farms are located in type-of-farming area VI-D3, a general farming area in the San Luis Valley in south central Colorado. The particular farms surveyed are quite diversified, producing livestock, hay, small grains, and potatoes.

The farms surveyed averaged about 581 acres per farm. Cropland comprised about 292 acres. In 1950, 26 acres were in wheat, and the yield averaged approximately 27 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 9 to 34; the most common was about 19.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.5	2.35	3.52	38	1.34
Purchased seed	Bu.	1.5	2.85	4.28	62	2.65
Ceresan	Bu.	1.5	.11	.16	17	.03
Water, ditch	Acre	1.0	.95	.95	100	.95
Water, pump	Acre	1.0	2.50	2.50	74	1.85
Twine, binder	Lb.	2.7	.27	.73	31	.23
Total materials						7.05

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Threshing	Bu.	27	.12	3.24	28	.91
Combining	Acre	1.0	5.60	5.60	36	2.02
Hauling, truck	Bu.	27	.06	1.62	36	.58
Total contract work						3.51

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area VI-D3, south central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-16 inch	1.0	1.31	1.25	39	0.51	0.49
Disk, tandem	8-foot	1.2	.63	.60	44	.33	.32
Harrow, springtooth	6-foot	1.0	.44	.40	15	.07	.06
Harrow, spiketooth	15-foot	2.2	.23	.21	43	.22	.20
Plow, Graham	8-foot	1.3	.56	.54	25	.18	.18
Level	9-foot	2.2	.51	.48	70	.78	.74
Level, wooden	10-foot	2.0	.45	.43	16	.14	.14
Irrigate	---	1.0	.72	---	26	.55	---
Drill	8-foot	1.0	.60	.55	58	.35	.32
Drill	10-foot	1.0	.48	.44	42	.20	.18
Ditch	6-foot	1.1	.13	.12	61	.09	.08
Dike	2-disk	1.1	.18	.16	32	.06	.06
Irrigate	---	2.5	.87	---	100	2.18	--
Total preharvest						5.66	2.77
Combine	6-foot	1.0	1.08	.99	33	.36	.33
Combine, s.p.,contract	12-foot	1.0	.56	.52	36	.20	---
Haul from combine,truck	1½-ton	1.0	.29	.26	33	.10	---
Haul grain, t.,contract	1½-ton	1.0	.59	.54	36	.21	---
Bind	10-foot	1.0	.84	.53	31	.26	.16
Shock	---	1.0	1.19	---	31	.37	---
Haul bundles, horses	---	1.0	2.84	4.06	19	.54	---
Haul bundles	---	1.0	3.68	1.69	12	.44	.20
Thresh	28-inch	1.0	.74	.48	3	.02	.01
Thresh, contract	28-inch	1.0	.74	.48	28	.21	.13
Haul grain, truck	1½-ton	1.0	.90	.63	23	.21	---
Total harvest						2.92	.83
Total 1/						8.58	3.60

1/ In addition, self-propelled combines averaged 0.19 hour an acre, truck use 0.42 hour an acre, and horse work 0.77 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D4, 1950

The data presented here are based on a survey made in 1951 of 26 farms producing wheat under irrigation. These farms are located in type-of-farming area VI-D4, a general farming area in the irrigated portion of the Upper Arkansas River Valley in southeastern Colorado. The particular farms surveyed are highly diversified, producing livestock, hay, small grains, and specialized crops.

The farms surveyed averaged about 484 acres per farm. Cropland comprised about 337 acres. In 1950, 38 acres were in wheat, and the yield averaged about 24 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 11 to 34; the most common was about 21.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 1/	Bu.	1.7	1.95	3.32	100	3.32
Ceresan	Bu.	1.7	.08	.14	23	.03
Phosphate fertilizer	Cwt.	2.00	3.40	6.80	3	.20
Water	Acre	1.0	2.00	2.00	100	2.00
Total materials						5.55

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying, plane	Acre	1.0	3.00	3.00	15	.45
Combining, s.p.	Acre	1.0	4.30	4.30	13	.56
Haul grain	Bu.	24	.05	1.50	5	.08
Total contract work						1.09

1/ Approximately 28 percent of the farmers in this area purchased wheat seed.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area VI-D4, southeastern Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-14 inch	1.0	1.29	1.23	100	1.29	1.23
Disk, tandem	7-foot	1.0	.63	.60	17	.11	.10
Harrow, spiketooth	18-foot	2.0	.21	.19	93	.39	.35
Level	9-foot	2.4	.51	.48	44	.54	.51
Level	12-foot	2.0	.41	.39	56	.46	.44
Drill	10-foot	1.0	.40	.37	100	.40	.37
Ditch	6-foot	1.0	.14	.13	60	.08	.08
Clean ditches	6-foot	1.9	.10	.09	45	.09	.08
Corrugate	10-foot	1.0	.38	.35	16	.06	.06
Irrigate	---	3.4	1.50	---	100	5.10	---
Spray, airplane	---	1.0	---	---	15	---	---
Total preharvest						8.52	3.22
Combine	5-foot	1.0	1.14	1.05	59	.67	.62
Combine, s.p.	12-foot	1.0	.44	.40	28	.12	---
Combine, s.p. c.	12-foot	1.0	.44	.40	13	.06	---
Haul from combine	---	1.0	.63	.58	18	.11	.10
Haul grain, truck	1½-ton	1.0	.56	.62	77	.43	---
Haul truck, contract	1½-ton	1.0	.56	.62	5	.03	---
Total harvest						1.42	.72
Total 1/						9.94	3.94

1/ In addition, self-propelled combines averaged 0.16 hour an acre and truck use 0.51 hour an acre.

Note: c.= operation performed on contract basis.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D5, 1951

The data presented here are based on a survey made in 1951 of approximately 45 farms producing wheat under irrigation in 1951 in southwestern Colorado. These farms are located in type-of-farming area VI-D5 which consists of a number of comparatively small irrigated areas in the San Juan Basin. Livestock and specialty crops are the most important enterprises on the farms in these areas.

The farms surveyed averaged about 270 total acres per farm. In 1951, 170 acres were in crops, including 32 in wheat. The average yield of wheat was about 25 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 10 to 30; the most common was about 13.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.00	4.20	4.20	100	4.20
Spray (2,4-D)	Pt.	1.0	.66	.66	10	.07
Water	Acre	1.0	1.95	1.95	100	1.95
Binder twine	Lb.	3.6	.35	1.26	8	.10
Bags	No.	15	.25	3.75	8	.30
Total materials						6.62

CONTRACT WORK HIRED

Treating seed	Cwt.	1.00	.25	.25	85	.21
Binding	Acre	1.0	3.50	3.50	3	.10
Threshing	Bu.	25	.10	2.50	6	.15
Combining	Acre	1.0	5.00	5.00	14	.70
Total contract work						1.16

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area VI-D5, southwestern Colorado, 1951

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-12 inch	1.0	1.65	1.58	41	0.68	0.65
Plow, chisel	7-foot	1.0	.52	.49	45	.23	.22
Plow, disk	6-foot	1.8	.59	.57	44	.47	.45
Disk, tandem	8-foot	1.2	.51	.46	57	.35	.31
Harrow, spiketooth	10-foot	1.5	.49	.45	75	.56	.51
Level	8-foot	1.5	.59	.57	72	.63	.62
Seed, drill	8-foot	1.0	.54	.49	100	.54	.49
Harrow, spiketooth	10-foot	1.0	.46	.42	45	.21	.19
Corrugate	8-foot	1.0	.51	.46	60	.31	.28
Ditch	---	1.0	.41	.31	50	.20	.16
Ditch by hand	---	1.0	.63	---	15	.09	---
Irrigate	---	1.8	7.08	---	100	12.74	---
Spray	20-foot	1.0	.78	.36	10	.08	.04
Total preharvest						17.09	3.92
Bind	8-foot	1.0	1.69	1.10	5	.08	.06
Bind, contract	8-foot	1.0	1.25	1.10	3	.04	.03
Shock by hand	---	1.0	2.38	---	6	.14	---
Haul to thresher	---	1.0	3.75	.86	8	.30	.07
Thresh	---	1.0	5.70	.82	2	.11	.02
Thresh, contract	---	1.0	5.70	.82	6	.34	.05
Combine	6-foot	1.0	1.69	1.04	56	.95	.58
Combine, self-propelled	12-foot	1.0	.94	.87	22	.21	---
Combine, s.p., contract	12-foot	1.0	.94	.87	14	.13	---
Haul, truck	1½-ton	1.0	.64	.59	96	.61	---
Total harvest						2.91	.81
Total 1/						20.00	4.73

1/ In addition truck use averaged 0.57 hour an acre and self-propelled combine 0.31 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, OREGON, 1950

The data presented here are based on a survey made in 1951 of approximately 30 farms producing wheat, oats, and barley under irrigation in central Oregon. These farms are located in type-of-farming area VI-D7, an area composed of irrigated valleys scattered throughout the western Mountain region. Livestock and specialized irrigated crops are the most important enterprises in these areas.

The farms surveyed averaged about 130 acres per farm. Cropland comprised about 92 acres. In 1950, 16 acres were in irrigated wheat, and the yield averaged about 38 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 7 to 27; the most common was about 17.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Bu.	2.0	2.20	4.40	100	4.40
Manure	Ton	3	1/ 2.00	6.00	9	.54
Mixed fertilizer	Cwt.	2.65	4.05	10.73	31	3.33
Nitrate fertilizer (21-0-0)	Cwt.	2.10	3.80	7.98	10	.80
Phosphate fertilizer(0-18-0)	Cwt.	2.00	1.90	3.80	5	.19
Water	Acre	1.0	2.50	2.50	100	2.50
Sacks, replacement	No.	19	.26	4.94	16	.79
Twine, sack	Lb.	.2	.87	.17	34	.06
Twine, binder	Lb.	3.3	.28	.92	3	.03
Total materials						12.64

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	6.32	6.32	32	2.02
Threshing	Acre	1.0	4.50	4.50	3	.14
Total contract work						2.16

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area VI-D7, central Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	---	1.0	2.86	0.92	9	0.26	0.08
Fertilize, spreader	10-foot	1.0	.50	.44	16	.08	.07
Pick and haul rocks	---	1.0	.60	.60	3	.02	.02
Plow, moldboard	2-16 inch	1.0	1.61	1.53	61	.98	.93
Disk, tandem	8-foot	1.5	.59	.57	56	.49	.48
Disk, offset	4-foot	1.6	.99	.94	38	.60	.57
Harrow, spiketooth	8-foot	1.7	.55	.50	78	.73	.66
Harrow, springtooth	8-foot	2.3	.62	.57	9	.13	.12
Level, steel	10-foot	1.4	.53	.50	12	.09	.08
Level, steel	8-foot	1.5	.66	.63	16	.16	.15
Roll	8-foot	1.2	.62	.57	36	.27	.24
Drill	8-foot	1.0	.62	.57	33	.20	.19
Drill	10-foot	1.0	.51	.46	67	.34	.31
Border strip	---	1.0	.48	.44	11	.05	.05
Harrow, spiketooth	8-foot	1.0	.69	.63	5	.03	.03
Corrugate	8-foot	1.0	.59	.54	65	.38	.35
Irrigate	---	3.0	.52	---	100	1.56	---
Total preharvest						6.37	4.33
Combine, bulk	6-foot	1.0	1.95	1.50	54	1.05	.81
Combine, sacked	6-foot	1.0	2.85	1.43	11	.31	.16
Combine, bulk, contract	6-foot	1.0	1.95	1.50	9	.18	.14
Combine, sacked, contract	6-foot	1.0	2.85	1.43	23	.66	.33
Bind	8-foot	1.0	1.04	.91	3	.03	.03
Haul & thresh, contract	---	1.0	---	---	3	---	---
Haul grain	---	1.0	.75	.52	36	.27	.19
Haul grain, truck	1½-ton	1.0	.45	.41	47	.21	---
Total harvest 1/						2.71	1.66
Total 2/						9.08	5.99

1/ Excludes hauling and threshing done on a contract basis for which no time requirements were available.

2/ In addition, truck use averaged 0.19 hour an acre.

WHEAT (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA VI-D7, 1952

The data presented here are based on a survey made in 1952 of approximately 40 farms that produced wheat under irrigation in 1952 in central Wyoming. These farms are located in type-of-farming area VI-D7, which is comprised of comparatively small irrigated valleys in the Intermountain region. The particular type-of-farming area in which these farms lie is located along Muddy Creek and Wind and Big Horn Rivers in central Wyoming. Much of the farming area is under newly established reclamation projects and many of the farms have been in operation only a few years. General farming prevails in the area.

The farms surveyed averaged about 230 acres per farm. In 1952, approximately 180 acres were in crops, including 26 in irrigated wheat. The average yield of wheat was about 36 bushels an acre. Most of the farmers in this area grow small grains in their rotations partly as a supplement to their feeding operations and partly as a nurse crop for new seedings of alfalfa. Oats and barley are more commonly grown than wheat.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 13 to 26; the most common was about 20.

Materials used and contract work hired, 1952 1/

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Cwt.	0.95	4.00	3.80	100	3.80
Manure	Ton	5	2/2.00	10.00	2	.20
Mixed fertilizer (10-20-0)	Cwt.	1.00	4.45	4.45	22	.98
Nitrate fertilizer(33-0-0)	Cwt.	1.00	5.00	5.00	5	.25
Spray (2,4-D)	Pt.	1.0	.75	.75	7	.05
Water	Acre	1.0	1.85	1.85	100	1.85
Twine	Lb.	3.5	.35	1.22	9	.11
Total materials						7.24

1/ No contract work was reported on farms surveyed in this area.

2/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area VI-D7, central Wyoming, 1952

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure	---	1.0	2.64	2.64	2	0.05	0.05
Plow, moldboard	1-18 inch	1.0	1.76	1.68	9	.16	.15
Plow, moldboard	2-14 inch	1.0	1.48	1.42	61	.90	.87
Disk, tandem	8-foot	1.5	.47	.45	62	.43	.42
Harrow	30-foot	2.2	.29	.26	75	.48	.43
Fertilize	8-foot	1.0	.54	.47	27	.15	.13
Level	8-foot	2.2	.56	.54	65	.80	.77
Level	10-foot	2.2	.45	.43	31	.31	.29
Seed, drill	8-foot	1.0	.54	.49	53	.29	.26
Seed, drill	10-foot	1.0	.44	.40	47	.21	.19
Ditch	---	1.2	.20	.19	70	.17	.16
Corrugate	5-22 inch	1.0	.43	.39	44	.19	.17
Spray	30-foot	1.0	.14	.13	7	.01	.01
Irrigate	---	2.9	4.50	---	100	13.05	---
Total preharvest						17.20	3.90
Windrow	7-foot	1.0	.67	.61	11	.07	.07
Bind	8-foot	1.0	1.39	.81	9	.13	.07
Shock	---	1.0	1.65	---	9	.15	---
Haul bundles	---	1.0	5.25	2.42	9	.47	.22
Thresh	---	1.0	1.68	.77	9	.15	.07
Combine	5-foot	1.0	1.40	1.17	64	.90	.75
Combine, self-propelled	12-foot	1.0	.62	.58	27	.17	---
Haul grain, truck	1½-ton	1.0	.77	.75	100	.77	---
Total harvest						2.81	1.18
Total 1/						20.01	5.08

1/ In addition, truck use averaged 0.75 hour an acre and self-propelled combine 0.16 hour an acre.

WHEAT, (IRRIGATED): RESOURCES USED IN PRODUCTION, AREA IX-F1, 1950

The data presented here are based on a survey made in 1950 of approximately 45 farms producing wheat under irrigation in 1950, in north central Wyoming and south central Montana. These farms are located in type-of-farming area IX-F1, a general farming and specialized cropping area in the irrigated valleys along the Big Horn, Shoshone, and Yellowstone Rivers in Montana and Wyoming. The particular farms surveyed are highly diversified, producing livestock, hay, small grains and specialized crops.

The farms averaged about 120 acres per farm. Cropland comprised about 108 acres. In 1950, approximately 11 acres were in wheat, and the yield averaged about 36 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 13 to 26; the most common was about 19.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	1.00	3.85	3.85	100	3.85
Manure	Ton	10	1/ 2.00	20.00	10	2.00
Mixed fertilizer	Cwt.	1.20	3.80	4.56	7	.32
Water	Acre	1.0	2.20	2.20	100	2.20
Binder twine	Lb.	3.2	.30	.96	36	.35
Total materials						8.72

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	1.00	.22	.22	33	.07
Combining	Acre	1.0	5.00	5.00	7	.35
Binding	Acre	1.0	3.25	3.25	16	.52
Threshing	Bu.	36	.07	2.52	36	.91
Total contract work						1.85

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting wheat, irrigated, area IX-F1, north central Wyoming and south central Montana, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Apply manure, spreader	75-bu.	1.0	0.92	0.74	10	0.09	0.07
Plow, moldboard	2-16 inch	1.0	1.33	1.26	35	.47	.44
Plow, moldboard	2-14 inch	1.0	1.50	1.42	6	.09	.09
Plow, moldboard	1-16 inch	1.0	2.25	2.14	22	.50	.47
Disk, tandem	8-foot	1.2	.65	.62	52	.41	.39
Fertilize, spreader	10-foot	1.0	.85	.55	7	.06	.04
Harrow, spiketooth	15-foot	1.9	.44	.40	75	.63	.57
Level	10-foot	1.7	.47	.43	92	.74	.67
Weed	12-foot	1.0	.68	.62	2	.01	.01
Seed, drill	8-foot	1.0	.61	.54	100	.61	.54
Corrugate	6-row	1.0	.44	.40	61	.27	.24
Irrigate	---	3.3	2.36	---	100	7.79	---
Ditch	---	1.0	.77	.71	95	.73	.67
Ditch by hand	---	1.0	.41	---	27	.11	---
Total preharvest						12.51	4.20
Windrow	9-foot	1.0	.54	.49	16	.09	.08
Combine	6-foot	1.0	1.46	1.29	57	.83	.74
Combine, contract	6-foot	1.0	1.46	1.29	7	.10	.09
Bind	7-foot	1.0	1.76	1.55	20	.35	.31
Bind, contract	7-foot	1.0	1.76	1.55	16	.28	.25
Shock by hand	---	1.0	1.50	---	30	.45	---
Haul bundles	---	1.0	5.78	2.31	36	2.08	.83
Thresh, contract	---	1.0	2.40	1.10	36	.86	.40
Haul grain, truck	1½-ton	1.0	1.14	1.13	97	1.11	---
Total harvest						6.15	2.70
Total 1/						18.66	6.90

1/ In addition, truck use averaged 1.10 hours an acre.

WHEAT, WINTER: RESOURCES USED IN PRODUCTION, AREA I-A3, 1950

The data presented here are based on a survey made in 1950 of 20 farms producing wheat in north central California. These farms are located in the grain-and rice-producing portions of type-of-farming area I-A3, a fruit and mixed-farming area in the Sacramento Valley.

The farms surveyed averaged about 1,189 acres. Cropland comprised about 1,103 acres. In 1950, 174 acres were in wheat, and the yield averaged approximately 31 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 14 to 69; the most common was about 40.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	1.5	2.35	3.52	100	3.52
Clean & treat seed	Bu.	1.5	.20	.30	37	.11
Nitrate fertilizer	Cwt.	1.00	3.85	3.85	13	.50
Spray (2,4-D)	Pt.	1.3	.67	.87	12	.10
Sacks, replacement	No.	14	.23	3.22	29	.93
Sack strings	No.	14	.01	.14	30	.04
Total materials						5.20

CONTRACT WORK HIRED

Seeding	Acre	1.0	.70	.70	9	.06
Spraying, plane	Acre	1.0	1.00	1.00	12	.12
Combining	Acre	1.0	4.15	4.15	14	.58
Hauling	Bu.	31	.06	1.86	25	.46
Total contract work						1.22

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, area I-A3, north central California, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	5-14 inch	1.0	0.68	0.65	24	0.16	0.16
Plow, moldboard	10-14 inch	1.0	.41	.39	44	.18	.17
Subsoil	2-prong	1.7	.95	.90	10	.16	.15
Chisel	10-foot	1.0	.51	.48	22	.11	.11
Disk, tandem	10-foot	1.1	.42	.40	51	.23	.22
Harrow, spiketooth	25-foot	1.6	.17	.16	13	.04	.03
Landplane	10-foot	1.7	.41	.39	26	.18	.17
Seed, drill	12-foot	1.0	.33	.30	36	.12	.11
Seed, endgate	---	1.0	.28	.13	55	.15	.07
Seed, plane, contract	---	1.0	---	---	9	---	---
Harrow, spiketooth	35-foot	1.3	.14	.13	54	.10	.09
Spray, plane, contract	---	1.0	---	---	12	---	---
Total preharvest						1.43	1.28
Combine, bulk	16-foot	1.0	.77	.36	37	.28	.13
Combine, sacked	16-foot	1.0	1.50	.46	17	.26	.08
Combine, sacked, contract	16-foot	1.0	1.50	.46	3	.04	.01
Combine, s.p., bulk	14-foot	1.0	.71	.51	33	.23	---
Combine, s.p., sacked	14-foot	1.0	1.25	.58	10	.12	---
Haul, bulk, truck	1½-ton	1.0	.32	.29	62	.20	---
Haul, sacked, truck	1½-ton	1.0	.51	.23	13	.07	---
Haul, truck, contract	1½-ton	1.0	.51	.23	17	.09	---
Total harvest						1.29	.22
Total 1/						2.72	1.50

1/ In addition, truck use averaged 0.25 hour an acre and self-propelled combines 0.23 hour an acre.

WHEAT, WINTER (CONTINUOUS CROPPING): RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of approximately 25 farms producing wheat under continuous cropping conditions in southeastern Colorado and northeastern New Mexico. These farms are located in type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 1,475 acres per farm. Cropland comprised about 427 acres. In 1950, 126 acres were planted to continuous-cropping wheat. Because of a severe drought in 1950, only about 12 percent of the acreage was harvested. The yield of about 3 bushels per harvested acre also was considerably below the usual yield for nonirrigated wheat of about 9 bushels per acre in the Colorado portion, and about 7 bushels in the New Mexico portion.

Tractors and motorized equipment provided most of the power used on these farms, although horses were used to haul bundles on farms where wheat was threshed. The drawbar-horsepower rating of the tractors ranged from 14 to 32; the most common was about 23.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed 1/	Bu.	0.5	1.90	0.95	100	0.95
Ceresan	Bu.	.5	.12	.06	7	.01
Total materials						.96

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	4.00	4.00	19	.76
Total contract work						.76

1/ Approximately 28 percent of the farmers in this area purchased seed wheat.

Man labor, power, and machinery used by operation in producing and harvesting wheat, continuous cropping, area II-B2, southeastern Colorado and northeastern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-14 inch	1.0	1.61	1.53	3	0.05	0.05
Plow, one-way	9-foot	1.7	.35	.34	55	.33	.32
Plow, one-way	12-foot	1.8	.26	.25	23	.11	.10
Plow, Graham	10-foot	1.2	.35	.34	20	.08	.08
Disk, single	8-foot	2.0	.40	.38	4	.03	.03
Field cultivate	4-row	1.0	.34	.32	6	.02	.02
List	2-row	1.5	.56	.51	8	.07	.06
Harrow, spiketooth	16-foot	1.3	.25	.23	8	.03	.02
Seed, drill	10-foot	1.0	.38	.35	40	.15	.14
Seed, drill	14-foot	1.0	.30	.27	60	.18	.16
Total preharvest						1.05	.98
Combine	6-foot	1.0	.59	.54	1/ 40	.24	.22
Combine	16-foot	1.0	.22	.21	1/ 39	.09	.08
Combine, s.p., contract	12-foot	1.0	.42	.39	1/ 19	.08	---
Haul, truck	1½-ton	1.0	.10	.09	1/ 98	.10	---
Bind	6-foot	1.0	1.10	.97	1/ 2	.02	.02
Haul to thresher, h.	---	1.0	3.61	2.43	1/ 2	.07	---
Thresh	26-inch	1.0	.53	.29	1/ 2	.01	.01
Haul, truck	1½-ton	1.0	.23	.21	1/ 2	.01	---
Total harvest						.62	.33
Total 2/						1.67	1.31

1/ Harvested acreage only. Because of a severe drought, only 12 percent of the planted acreage was harvested.

2/ In addition, truck use averaged 0.10 hour an acre, self-propelled combines 0.07 hour an acre and horse work 0.05 hour an acre.

WHEAT, WINTER (CONTINUOUS CROPPING): RESOURCES USED IN PRODUCTION, AREA III-A4, 1952

The data presented here are based on a survey made in 1952 of 15 farms producing winter wheat in type-of-farming area III-A4. This is a wheat and small grain area in the central plains along the Platte and Laramie Rivers in southeastern Wyoming, southwestern Nebraska, and northeastern Colorado. The farms are comparatively large, and wheat production is the dominant enterprise. Most of the wheat grown, however, is on fallowed ground. Continuous cropping of wheat occurs only in occasional years when the farm operator is attempting to readjust his enterprise or desires to take advantage of temporary economic situations.

The farms surveyed averaged 1,640 acres per farm. Cropland comprised about 1,030 acres. In 1952, 40 acres were in wheat and the yield averaged approximately 13.5 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 27 to 34; the most common was about 31.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	0.8	1.90	1.52	100	1.52
Total materials						1.52

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Bu.	.8	.11	.09	30	.03
Trucking	Bu.	13.5	.05	.68	2	.01
Combining	Acre	1.0	3.50	3.50	2	.07
Total contract work						.11

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, continuous cropping, area III-A4, southeastern Wyoming, southwestern Nebraska, and northeastern Colorado, 1952

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-16 inch	1.0	0.70	0.67	46	0.32	0.31
Plow, wheatland	10-foot	1.5	.29	.27	63	.28	.25
Disk, tandem	12-foot	1.5	.22	.21	23	.08	.07
Harrow, spiketooth	20-foot	1.5	.15	.14	25	.06	.05
Weed, rod weeder	12-foot	1.0	.24	.22	28	.07	.06
Seed, drill	14-foot	1.0	.30	.27	100	.30	.27
Total preharvest						1.11	1.01
Combine, self-propelled	12-foot	1.0	.38	.34	82	.31	---
Combine	12-foot	1.0	.51	.44	16	.08	.07
Combine, s.p., contract	12-foot	1.0	.38	.34	2	.01	---
Truck	1½-ton	1.0	.34	.38	98	.33	---
Truck, contract	1½-ton	1.0	.34	.38	2	.01	---
Total harvest						.74	.07
Total 1/						1.85	1.08

1/ In addition, truck use averaged 0.38 hour an acre and self-propelled combines 0.29 hour an acre.

WHEAT, WINTER (CONTINUOUS CROPPING): RESOURCES USED IN PRODUCTION, AREA III-B1, 1948

The data presented here are based on a survey made in 1949 of approximately 33 farms in east central Washington and northern Idaho. These farms are located in type-of-farming area III-B1, the wheat-pea area in the Palouse Region of Washington and Idaho. Most of the wheat is grown under a system of continuous cropping although some wheat is grown after summer fallow or sweet clover turned under for green manure.

The farms surveyed averaged 467 acres per farm. In 1948, cropland comprised about 311 acres, of which about half, or 157 acres was in winter wheat. The yield of winter wheat averaged 30.5 bushels per acre.

Tractors provided nearly all the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 18 to 45; the most common was about 28.

Materials used and contract work hired, 1948

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	1.3	2.50	3.25	100	3.25
Ammonium sulphate	Cwt.	1.50	3.30	4.95	4	.20
Ammonium nitrate	Cwt.	1.00	4.00	4.00	1	.04
Sodium chlorate	Cwt.	1.1	12.40	13.64	2	.27
Spray (2,4-D)	Gal.	.13	9.25	1.20	20	.24
Total materials						4.00

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating and cleaning	Bu.	1.3	.30	.39	80	.31
Combining	Acre	1.0	6.00	6.00	12	.72
Hauling	Bu.	30.5	.06	1.83	17	.31
Total contract work						1.34

Man labor, power, and machinery used by operation, in producing and harvesting winter wheat, continuous cropping, area III-B1, east central Washington and northern Idaho, 1948

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Fertilize, spreader	10-foot	1.0	0.40	0.10	5	0.02	0.01
Disk, tandem	10-foot	1.0	.45	.45	9	.04	.04
Plow, moldboard	4-16 inch	1.0	.48	.46	17	.08	.08
Disk, plow	12-foot	1.0	.30	.30	83	.25	.25
Disk and harrow	10-foot	1.0	.33	.33	2	.01	.01
Harrow, spiketooth	45-foot	1.2	.09	.09	50	.05	.05
Weed, rotary hoe	21-foot	1.0	.14	.12	4	.01	.01
Disk and drill	11-foot	1.0	.69	.35	1	.01	.01
Disk, drill & harrow	11-foot	1.0	.88	.44	3	.03	.01
Seed, drill	20-foot	1.0	.21	.17	96	.20	.16
Spray	24-foot	1.0	.70	.45	20	.14	.09
Hoe and spray	Hand	1.0	.20	---	50	.10	---
Total preharvest						.94	.72
Combine	14-foot	1.0	1.10	.42	88	.97	.37
Combine, contract,	14-foot	1.0	1.10	.42	12	.13	.05
Haul grain, truck	1½-ton	1.0	.66	.66	83	.55	---
Haul, contract, truck	1½-ton	1.0	.66	.66	17	.11	---
Total harvest						1.76	.42
Total 1/						2.70	1.14

1/ In addition, truck use averaged 0.66 hour an acre.

WHEAT, SPRING (CONTINUOUS CROPPING): RESOURCES USED IN PRODUCTION, AREA III-C2, 1950

The data presented here are based on a survey made in 1951 of 22 farms producing spring wheat after wheat on a continuous cropping basis. These farms are located in type-of-farming area III-C2, a wheat and range-livestock area in northeastern Montana and southwestern North Dakota.

The farms surveyed averaged 1,071 acres per farm. Cropland comprised about 654 acres. In 1950, 188 acres were in spring wheat, and the yield averaged about 7 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 10 to 41; the most common was about 24.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed, home-grown	Bu.	1.0	1/ 2.00	2.00	100	2.00
Total materials						2.00

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	5.00	5.00	21	1.05
Total contract work						1.05

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting spring wheat, continuous cropping, area III-C2, northeastern Montana and southwestern North Dakota, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, one-way	10-foot	1.0	0.28	0.26	14	0.04	0.04
Plow and pack	3-14 inch	1.0	.70	.67	28	.20	.19
Disk, tandem	10-foot	2.4	.25	.24	8	.05	.05
Disk, single	15-foot	1.3	.24	.23	19	.06	.06
Field, cultivate	8-foot	1.3	.32	.30	16	.07	.06
Harrow, spiketooth	21-foot	2.0	.13	.13	10	.03	.03
Drill	12-foot	1.0	.26	.24	29	.08	.07
Disk and drill	10-foot	1.0	.31	.29	68	.21	.20
Plow, pack & pony drill	4-foot	1.0	.50	.44	3	.02	.01
Total preharvest						.76	.71
Windrow	12-foot	1.0	.23	.22	26	.06	.06
Combine	12-foot	1.0	.34	.32	79	.27	.25
Combine, contract	12-foot	1.0	.30	.28	21	.06	.06
Haul grain, truck	---	1.0	.44	.32	100	.44	---
Total harvest						.83	.37
Total 1/						1.59	1.08

1/ In addition, truck use averaged 0.32 hour an acre.

WHEAT, WINTER (CONTINUOUS CROPPING): RESOURCES USED IN PRODUCTION, AREA III-C3, 1950

The data presented here are based on a survey made in 1951 of nine farms producing winter wheat and barley on a continuous cropping basis in east central Colorado. These farms are located in the Colorado portion of type-of-farming area III-C3, a wheat and range-livestock area in the Central High Plains.

The farms surveyed averaged about 848 acres per farm. Cropland comprised about 447 acres. In 1950, 121 acres were in wheat following wheat or barley, and the yield averaged almost 8 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 12 to 28; the most common was about 20.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	0.6	1.75	1.05	61	0.64
Purchased seed	Bu.	.6	2.00	1.20	39	.47
Ceresan	Bu.	.6	.03	.02	39	.01
Total materials						1.12

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Cleaning seed	Bu.	.6	.09	.05	25	.01
Total contract work						.01

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, continuous cropping, area III-C3, east central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.98	0.93	27	0.26	0.25
Plow, one-way	12-foot	1.0	.32	.30	62	.20	.19
Plow, Graham	10-foot	2.0	.30	.28	65	.39	.36
Disk, tandem	10-foot	1.3	.32	.30	41	.17	.16
Weed, rod weeder	12-foot	1.0	.25	.23	25	.06	.06
Harrow, spiketooth	20-foot	1.0	.20	.18	34	.07	.06
Drill	12-foot	1.0	.30	.27	100	.30	.27
Total preharvest						1.45	1.35
Combine	6-foot	1.0	1.02	.79	19	.19	.15
Combine	12-foot	1.0	.70	.46	81	.57	.37
Haul, truck	$1\frac{1}{2}$-ton	1.0	.30	.28	100	.30	---
Total harvest						1.06	.52
Total 1/						2.51	1.87

1/ In addition, truck use averaged 0.28 hour per acre.

WHEAT, WINTER: RESOURCES USED IN PRODUCTION, AREA IV-E1, 1950

The data presented here are based on a survey made in 1950 of 31 farms producing winter wheat in the Willamette Valley of western Oregon. These farms are located in type-of-farming area IV-E1, a dairy and mixed-farming area ranging from the Puget Sound area south through the Willamette Valley.

The farms surveyed averaged about 321 acres per farm. Cropland comprised about 238 acres. In 1950, 26 acres were in wheat, and the yield averaged approximately 33 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 14 to 31; the most common was about 22.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	1.7	1.95	3.32	71	2.36
Purchased seed	Bu.	1.7	2.40	4.08	29	1.18
Clean & treat seed	Bu.	1.7	.20	.34	50	.17
Mixed fertilizer(16-20-0)	Cwt.	1.70	4.10	6.97	3	.21
Nitrate fertilizer(21-0-0)	Cwt.	.80	3.20	2.56	9	.23
Nitrate fertilizer(33-0-0)	Cwt.	.80	4.15	3.32	14	.46
Spray (2,4-D)	Pt.	1.6	.60	.96	18	.17
Sacks, replacement	No.	14	.23	3.22	11	.35
Sack strings	No.	14	.01	.14	36	.05
Total materials						5.18

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	1.50	1.50	9	.14
Combining	Acre	1.0	4.10	4.10	7	.29
Hauling	Cwt.	19.8	.08	1.58	12	.19
Total contract work						.62

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, area IV-El, western Oregon, 1950

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	2-16 inch	1.0	1.14	1.09	30	0.34	0.33
Plow, moldboard	3-16 inch	1.0	.76	.72	65	.49	.47
Disk, tandem	8-foot	1.6	.43	.41	53	.37	.35
Fertilize, spreader	12-foot	1.0	.26	.23	11	.03	.03
Harrow, spiketooth	10-foot	1.8	.38	.35	56	.38	.35
Harrow, go-devil	12-foot	1.5	.33	.30	26	.13	.12
Rototill	6-foot	1.0	.77	.70	3	.02	.02
Roll	10-foot	1.0	.40	.37	11	.04	.04
Seed, drill	10-foot	1.0	.33	.30	100	.33	.30
Harrow, spiketooth	8-foot	1.0	.37	.34	9	.03	.03
Spray	18-foot	1.0	.20	.18	9	.02	.02
Spray, contract	18-foot	1.0	.20	.18	9	.02	.02
Total preharvest						2.20	2.08
Combine, sacked	6-foot	1.0	2.10	.97	21	.44	.20
Combine, bulk	6-foot	1.0	1.01	.93	10	.10	.09
Combine, sacked	12-foot	1.0	1.10	.51	15	.16	.08
Combine, s.p., bulk	12-foot	1.0	.67	.62	47	.31	---
Combine, s.p., bulk, c.	12-foot	1.0	.67	.62	7	.05	---
Haul, sacked	---	1.0	.57	.38	3	.02	.01
Haul, sacked, truck	1½-ton	1.0	.58	.35	28	.16	---
Haul, bulk, truck	2-ton	1.0	.30	.30	57	.17	---
Haul, truck, contract	---	1.0	.44	.33	12	.05	---
Total harvest						1.46	.38
Total 1/						3.66	2.46

1/ In addition, truck use averaged 0.31 hour an acre and self-propelled combines 0.33 hour an acre.

Note: c. = operation performed on contract basis.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA II-A1, 1951

The data presented here are based on a survey made in 1951 of approximately 56 farms producing wheat with summer fallow methods in west central Utah. For the most part these are crop-specialty farms located in comparatively small tillable areas within type-of-farming area II-A1, a seasonal migratory grazing area in the Great Basin.

The farms averaged about 790 total acres per farm. Cropland comprised about 515 acres. In 1951, 220 acres were in wheat, and the yield averaged slightly less than 15 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 16 to 32. There were three common sizes: 16, 26 and 32.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.80	3.60	2.88	100	2.88
Fertilizer (am.nitrate)	Cwt.	1.50	4.00	6.00	1	.06
Bags	No.	1.0	.20	.20	7	.01
Sack twine	Lb.	.2	.35	.07	50	.04
Total materials						2.99

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	.80	.23	.18	90	.16
Combining	Acre	1.0	3.50	3.50	8	.28
Hauling	Bu.	15	.06	.90	18	.16
Total contract work						.60

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area II-A1, west central, Utah, 1951

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.88	0.84	18	0.16	0.15
Plow, one-way	8-foot	1.0	.44	.42	52	.23	.22
Plow, Graham	12-foot	1.3	.32	.30	55	.23	.21
Disk, tandem	10-foot	1.2	.37	.34	45	.20	.18
Harrow, spiketooth	20-foot	1.4	.21	.19	71	.21	.19
Weed, rod weeder	12-foot	1.4	.28	.25	90	.35	.32
Level	12-foot	1.0	.36	.35	13	.05	.05
Seed, drill	12-foot	1.0	.32	.29	100	.32	.29
Total preharvest						1.75	1.61
Combine	12-foot	1.0	.81	.41	52	.42	.21
Combine, self-propelled	12-foot	1.0	.54	.49	40	.22	---
Combine, contract, s.p.	12-foot	1.0	.54	.49	8	.04	---
Haul, truck	1½-ton	1.0	.44	.36	82	.36	---
Haul, truck, contract	1½-ton	1.0	.44	.36	18	.08	---
Total harvest						1.12	.21
Total 1/						2.87	1.82

1/ In addition self-propelled combine use averaged 0.24 hour an acre and truck use 0.36 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA II-B2, 1950

The data presented here are based on a survey made in 1951 of approximately 60 farms producing wheat under summer-fallow conditions in southeastern Colorado and northeastern New Mexico. These farms are located in type-of-farming area II-B2, a range-livestock area in the southern High Plains.

The farms surveyed averaged about 1,800 acres per farm. Cropland comprised about 840 acres. In 1950, 426 acres were planted to summer-fallowed wheat. Because of a severe drought in 1950, only about 20 percent of the acreage was harvested. The yield of about 4 bushels per harvested acre also was considerably below the usual yield for nonirrigated wheat of about 9 bushels per acre in the Colorado portion, and about 7 bushels per acre in the New Mexico portion.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 14 to 39; the most common was about 25.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	0.5	1.90	0.95	53	0.50
Purchased seed	Bu.	.5	2.30	1.15	47	.54
Ceresan	Bu.	.5	.12	.06	18	.01
Spray (2,4-D)	Pt.	.75	.70	.53	1	.01
Total materials						1.06

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	2.75	2.75	15	.41
Hauling	Bu.	4	.10	.40	14	.06
Total contract work						.47

Man labor, power, and machinery used by operation in producing and harvesting wheat, summer fallow, area II-B2, southeastern Colorado and northeastern New Mexico, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, one-way	9-foot	1.9	0.34	0.33	34	0.22	0.21
Plow, one-way	15-foot	3.0	.20	.19	66	.40	.38
Plow, Graham	10-foot	1.3	.34	.33	24	.11	.10
Plow, Graham	16-foot	1.5	.20	.19	37	.11	.10
Field cultivate	6-foot	1.0	.41	.38	6	.02	.02
List	2-row	1.8	.54	.49	4	.04	.04
Weed, rod weeder	12-foot	1.0	.24	.22	3	.01	.01
Harrow, spiketooth	16-foot	1.7	.25	.23	4	.02	.02
Harrow, spiketooth	24-foot	1.5	.15	.14	8	.02	.02
Seed, drill	10-foot	1.0	.38	.35	9	.03	.03
Seed, drill	13-foot	1.0	.32	.29	43	.14	.12
Seed, drill	24-foot	1.0	.16	.15	48	.08	.07
Spray	24-foot	1.0	.19	.17	1	.01	.01
Total preharvest						1.21	1.13
Combine	6-foot	1.0	.56	.52	1/ 26	.15	.14
Combine	12-foot	1.0	.46	.39	1/ 44	.20	.17
Combine, self-propelled	14-foot	1.0	.42	.39	1/ 15	.06	---
Combine, s.p., contract	14-foot	1.0	.42	.39	1/ 15	.06	---
Haul grain, truck	1½-ton	1.0	.09	.08	1/ 83	.07	---
Haul, truck, contract	1½-ton	1.0	.09	.08	1/ 14	.01	---
Total harvest						.55	.31
Total 2/						1.76	1.44

1/ Harvested acreage only. Because of a severe drought, only 20 percent of the planted acreage was harvested.

2/ In addition, self-propelled combines averaged 0.12 hour an acre and truck use 0.08 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA II-C3, 1951

The data presented here are based on a survey made in 1951 of approximately 46 farms producing summer fallow wheat in 1951 in southwestern Colorado. These farms are located on the west central border of type-of-farming area II-C3, and produce mostly livestock and specialty crops.

The farms surveyed averaged 535 total acres per farm. Cropland comprised about 440 acres. In 1951, about 100 acres of wheat were harvested per farm with an average yield of slightly over 13 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 34. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.50	4.00	2.00	100	2.00
Total materials						2.00

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	.50	.30	.15	100	.15
Combining	Acre	1.0	3.75	3.75	15	.56
Hauling	Bu.	13	.04	.52	18	.09
Total contract work						.80

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area II-C3, southwestern Colorado, 1951

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.94	0.89	8	0.08	0.07
Plow, disk	7-foot	1.0	.46	.44	20	.09	.09
Plow, Graham	12-foot	1.0	.29	.27	70	.20	.19
Disk, tandem	8-foot	1.9	.49	.45	15	.14	.13
Harrow, springtooth	12-foot	1.2	.30	.27	21	.08	.07
Harrow, spiketooth	20-foot	1.5	.18	.17	35	.09	.09
Weed, rotary hoe	14-foot	1.2	.20	.18	58	.14	.13
Level	8-foot	1.0	.42	.40	7	.03	.03
Seed, drill	10-foot	1.0	.34	.32	100	.34	.32
Total preharvest						1.19	1.12
Combine	6-foot	1.0	1.02	.72	85	.87	.61
Combine, contract	6-foot	1.0	1.02	.72	15	.15	.11
Haul, truck	1½-ton	1.0	.38	.38	82	.31	---
Haul, truck, contract	1½-ton	1.0	.38	.38	18	.07	---
Total harvest						1.40	.72
Total 1/						2.59	1.84

1/ In addition truck use averaged 0.38 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA II-D1, 1951

The data presented here are based on a survey made in 1951 of approximately 46 farms producing summer fallow wheat in 1951 in San Juan County, Utah. These farms are in a comparatively small livestock and specialized cropping area in the northeastern portion of type-of-farming area II-D1, a semidesert, year-long migratory grazing area.

The farms surveyed averaged about 1,265 total acres per farm. Cropland comprised about 630 acres. In 1951, approximately 268 acres were planted to wheat. About 225 acres were harvested with a yield of a little over 13 bushels of wheat per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 37. There were two common sizes: 16 and 26.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.35	3.60	1.26	100	1.26
Total materials						1.26

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	.35	.25	.09	93	.08
Combining	Acre	1.0	3.00	3.00	27	.81
Hauling, truck	Bu.	13.4	.06	.80	19	.15
Total contract work						1.04

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area II-D1, southeastern Utah, 1951

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.94	0.89	19	0.18	0.17
Plow, moldboard	4-14 inch	1.0	.55	.52	23	.13	.12
Plow, disk	8-foot	1.0	.55	.52	45	.25	.23
Plow, chisel	10-foot	1.1	.50	.47	33	.18	.17
Disk, tandem	10-foot	1.3	.34	.32	31	.14	.13
Harrow, spiketooth	20-foot	1.2	.21	.19	31	.08	.07
Weed, rod weeder	12-foot	1.5	.25	.23	42	.16	.14
Springtooth & rotary hoe	12-foot	1.3	.26	.24	76	.26	.24
Seed, drill	12-foot	1.0	.31	.27	100	.31	.27
Total preharvest						1.69	1.54
Combine	6-foot	1.0	.88	.80	40	.35	.32
Combine, self-propelled	12-foot	1.0	.44	.40	33	.15	---
Combine, s.p., contract	12-foot	1.0	.44	.40	27	.12	---
Haul, truck	1½-ton	1.0	.40	.37	81	.32	---
Haul, truck, contract	1½-ton	1.0	.40	.37	19	.08	---
Total harvest						1.02	.32
Total 1/						2.71	1.86

1/ In addition truck use averaged 0.37 hour an acre and self-propelled combine use 0.24 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, OREGON PORTION OF AREA III-A1, 1948

The data presented here are based on a survey made in 1949 of 101 farms producing winter wheat after summer fallow. These farms are located in that part of type-of-farming area III-A1 which is in the Columbia Basin in Oregon. This is a cash-wheat area in the north central part of the State.

The farms surveyed averaged 2,740 acres per farm. In 1948, cropland comprised about 1,829 acres, of which 675 acres were in winter wheat. The yield of winter wheat averaged 31 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of track-laying tractors ranged from 18.0 to 62.5; the most common was about 34. Wheel tractors ranged from 9.8 to 32.1 D.B.H.P.; the most common was about 20.

Materials used and contract work hired, III-A1

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	1.1	2.20	2.42	100	2.42
Nitrate	Cwt.	1.00	4.45	4.45	2	.09
Ceresan	Bu.	1.1	.03	.03	77	.02
Spray (2,4-D)	Gal.	.14	7.75	1.08	36	.39
Dust (2,4-D)	Lb.	15.6	.15	2.34	5	.12
Total materials						3.04

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed cleaning	Bu.	1.1	.15	.17	23	.04
Spraying	Acre	1.0	1.95	1.95	14	.27
Combining	Acre	1.0	5.50	5.50	6	.33
Hauling	Cwt.	18.5	.04	.74	4	.03
Total contract work						.67

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-A1, north central Oregon, 1948

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Disk, single	19-foot	1.0	0.18	0.16	30	0.05	0.05
Plow, moldboard	6-16 inch	1.0	.37	.32	60	.23	.19
Plow, disk	13-foot	1.0	.24	.22	29	.07	.06
Plow, Graham	21-foot	1.1	.14	.13	8	.01	.01
Harrow, springtooth	33-foot	1.3	.13	.12	77	.13	.12
Harrow, spiketooth	50-foot	1.1	.07	.07	38	.03	.03
Cultivate, duckfoot	25-foot	1.5	.14	.12	8	.02	.02
Weed, rod weeder	36-foot	2.9	.10	.09	100	.29	.26
Rotary hoe	36-foot	2.5	.09	.08	9	.02	.02
Clean & treat seed	---	1.0	.04	---	77	.03	---
Clean & treat seed, c.	---	1.0	.04	---	23	.01	---
Drill	30-foot	1.0	.18	.11	100	.18	.11
Spray	35-foot	1.0	.16	.08	29	.05	.02
Spray, contract	35-foot	1.0	.16	.08	14	.02	.01
Dust	30-foot	1.0	.13	.08	23	.03	.02
Total preharvest						1.17	.92
Combine	17-foot	1.0	.64	.23	94	.60	.22
Combine, contract	17-foot	1.0	.64	.23	6	.04	.01
Haul, truck	1½-ton	1.0	.47	.47	96	.45	---
Haul, truck, contract	1½-ton	1.0	.47	.47	4	.02	---
Total harvest						1.11	.23
Total 1/						2.28	1.15

1/ In addition truck use averaged 0.47 hour an acre.

Note: c. = operation performed on contract basis.

WHEAT, WINTER (SUMMER FALLOW) RESOURCES USED IN PRODUCTION, IN THE BIG BEND PORTION OF AREA III-A1, 1948

The data presented here are based on a survey made in 1949 of approximately 86 farms producing wheat in alternate years with summer fallow. These farms are located in the drier portions of type-of-farming area III-A1, a cash-wheat area in the Big Bend region of central Washington.

The farms surveyed averaged 2,041 acres per farm. In 1948, cropland comprised about 1,888 acres, of which 929 acres were in winter wheat. The average yield was about 26 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from about 28 to 62. There were four common sizes: 28, 34, 40, and 62.

Materials used and contract work hired, 1948

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	1.12	2.14	2.40	100	2.40
Ceresan	Bu.	1.12	.02	.02	58	.01
Total materials						2.41

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating & cleaning	Bu.	1.12	.11	.12	31	.04
Disk plowing	Acre	1.0	.75	.75	4	.03
Combining	Acre	1.0	3.05	3.05	9	.27
Hauling	Cwt.	15.5	.10	1.55	8	.12
Total contract work						.46

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-A1, central Washington, 1948

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, disk	18-foot	1.0	0.21	0.19	82	0.17	0.16
Plow, disk, contract	18-foot	1.0	.21	.19	4	.01	.01
Plow, moldboard	6-16 inch	1.0	.39	.36	19	.07	.07
Disk, tandem	18-foot	1.2	.21	.19	48	.12	.11
Harrow, spiketooth	58-foot	1.3	.07	.06	18	.02	.01
Harrow, springtooth	39-foot	1.9	.10	.09	19	.04	.03
Weed, rod weeder	38-foot	2.6	.10	.09	100	.26	.23
Drill	33-foot	1.0	.13	.12	100	.13	.12
Harrow, spiketooth	40-foot	1.0	.07	.06	30	.02	.02
Total preharvest						.84	.76
Combine	17-foot	1.0	.69	.29	91	.63	.26
Combine, contract	17-foot	1.0	.69	.29	9	.06	.02
Hauling, truck	1½-ton	1.0	.43	.43	92	.40	---
Hauling, truck, contract	1½-ton	1.0	.43	.43	8	.03	---
Total harvest						1.12	.28
Total [1]						1.96	1.04

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[1] In addition, truck use averaged 0.43 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, EASTERN PART OF AREA III-A1, 1948

The data presented here are based on a survey made in 1949 of approximately 52 farms producing wheat after summer fallow. These farms are located in the higher rainfall portions of type-of-farming area III-A1, a cash-wheat area in central Washington.

The farms surveyed averaged 1,200 acres per farm. In 1948, cropland comprised about 829 acres, which was divided about equally between summer fallow and wheat. Most of the wheat is planted in the fall and harvested the following summer. The yield of winter wheat averaged 32 bushels per acre in 1948.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 23 to 45; the most common was about 27.

Materials used and contract work hired, 1948

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	1.1	2.30	2.53	100	2.53
Ceresan	Bu.	1.1	.02	.02	43	.01
Sodium chlorate	Lb.	110	.13	14.30	1/	.03
Spray (2,4-D)	Gal.	.13	9.00	1.17	17	.20
Total materials						2.77

CONTRACT WORK HIRED

Seed cleaning and treating	Bu.	1.1	.18	.20	31	.06
Spraying	Acre	1.0	3.00	3.00	4	.12
Combine	Acre	1.0	6.00	6.00	4	.24
Hauling	Bu.	31.7	.06	1.90	2	.04
Total contract work						.46

1/ Less than one-half of 1 percent.

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-A1, central Washington, 1948

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	6-16 inch	1.0	0.42	0.39	76	0.32	0.30
Plow, disk	12-foot	1.4	.33	.31	50	.22	.21
Harrow, spiketooth	55-foot	1.9	.08	.07	60	.08	.08
Weed, rod weeder	30-foot	2.5	.14	.14	79	.28	.27
Harrow, springtooth	26-foot	1.2	.16	.16	30	.06	.06
Disk, tandem	20-foot	1.3	.19	.19	29	.07	.07
Subsoil	8-foot	1.0	.23	.23	2	.01	.01
Seed, drill	23-foot	1.0	.22	.16	100	.22	.16
Harrow	55-foot	1.0	.07	.07	74	.05	.05
Spray	30-foot	1.0	.30	.20	13	.04	.03
Spray, contract	30-foot	1.0	.30	.20	4	.01	.01
Total preharvest						1.36	1.25
Combine	16-foot	1.0	.94	.33	96	.90	.32
Haul, truck	---	1.0	.57	.57	98	.56	---
Combine, contract	16-foot	1.0	.94	.33	4	.04	.01
Haul, contract, truck	---	1.0	.57	.57	2	.01	---
Total harvest						1.51	.33
Total 1/						2.87	1.57

1/ In addition, truck use averaged 0.57 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA III-A4, 1952

The data presented here are based on a survey made in 1952 of 55 farms producing winter wheat in type-of-farming area III-A4. This is a wheat and small grain area in the central plains along the Platte and Laramie Rivers in southeastern Wyoming, southwestern Nebraska, and northeastern Colorado. The farms are comparatively large, and wheat growing is the dominant enterprise. Most of the wheat is grown on fallowed ground.

The farms surveyed averaged 1,250 acres per farm. Cropland comprised about 830 acres. In 1952, 400 acres were in wheat and the yield averaged approximately 26 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 24 to 36; the most common was about 34.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	0.7	1.90	1.33	100	1.33
Spray (2,4-D)	Pt.	1.0	.56	.56	4	.02
Total materials						1.35

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Fertilizing (82-0-0) 1/	Acre	1.0	6.00	6.00	1	.06
Cleaning seed	Bu.	.7	.11	.08	15	.01
Combining	Acre	1.0	3.50	3.50	4	.14
Trucking	Bu.	26	.05	1.30	5	.06
Total contract work						.27

1/ Approximately 40 units were applied.

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-A4, southeastern Wyoming, southwestern Nebraska, and northeastern Colorado, 1952

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	5-16 inch	1.0	0.45	0.44	32	0.14	0.14
Plow, moldboard	4-16 inch	1.0	.56	.54	32	.18	.17
Plow, moldboard	3-16 inch	1.0	.70	.67	16	.11	.11
Plow, wheatland	10-foot	1.2	.30	.28	60	.22	.20
Plow, Graham	12-foot	1.5	.25	.24	42	.16	.15
Disk, tandem	10-foot	1.0	.13	.12	15	.02	.02
Harrow, springtooth	12-foot	1.6	.28	.25	82	.37	.33
Weed, rod weeder	12-foot	1.5	.26	.24	64	.25	.23
Weed, rod weeder	24-foot	2.0	.13	.12	34	.09	.08
Seed, drill	14-foot	1.0	.30	.27	100	.30	.27
Spray	30-foot	1.0	.26	.24	4	.01	.01
Total preharvest						1.85	1.71
Combine, self-propelled	12-foot	1.0	.40	.37	79	.32	---
Combine	12-foot	1.0	.51	.44	17	.09	.07
Combine, s.p., contract	12-foot	1.0	.40	.37	4	.02	---
Truck	1½-ton	1.0	.34	.38	95	.32	---
Truck, contract	1½-ton	1.0	.34	.38	5	.02	---
Total harvest						.77	.07
Total 1/						2.62	1.78

1/ In addition, truck use averaged 0.38 hour an acre and self-propelled combines 0.30 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA III-B1, 1948

The data presented here are based on a survey made in 1949 of farms in type-of-farming area III-B1, the wheat-pea area in the Palouse Region of east central Washington and northern Idaho. The harvested acreage of winter wheat usually exceeds by several times the acreage in summer fallow. However, in 1948 there were only 1.7 acres of winter wheat harvested to each acre of summer fallow.

Most of the data are based on operations performed on 26 farms in 1948. The information on harvesting operations reported here was obtained from records on 33 farms that grew wheat after wheat or other crops without benefit of summer fallow or green manure crops.

The farms surveyed ranged in size from 376 to 585 acres and averaged 467 acres per farm. In 1948, cropland per farm was about 311 acres, of which 157 acres were in winter wheat, 94 acres were in summer fallow, and 26 acres were in sweet clover to be turned under for green manure. Most of the 1948 acreage in summer fallow and sweet clover was used in 1949 for winter wheat production. The yield of all winter wheat in 1948 was about 30.5 bushels per acre. Although the yield of winter wheat on summer fallow probably exceeded this average, no attempt was made to determine differences in yields due to previous land use.

Tractors provided most of the power used on these farms. They were used on operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 18 to 45; the most common was about 29.

Materials used and contract work hired, 1948

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	1.3	2.50	3.25	100	3.25
Sodium chlorate	Cwt.	1.1	12.40	13.64	2	.27
Total materials						3.52

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating and cleaning	Bu.	1.3	.30	.39	80	.31
Combining	Acre	1.0	6.00	6.00	12	.72
Hauling	Bu.	30.5	.06	1.83	17	.31
Total contract work						1.34

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-B1, east central Washington and northern Idaho, 1948.

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	4-16 inch	1.1	0.56	0.56	95	0.53	0.53
Disk, tandem	12-foot	1.4	.29	.28	53	.22	.21
Harrow, spiketooth	38-foot	2.2	.09	.07	54	.11	.08
Rod weed & harrow	20-foot	2.0	.10	.10	3	.01	.01
Weed, rod weeder	20-foot	2.3	.20	.19	76	.35	.33
Harrow, springtooth	20-foot	3.3	.22	.22	51	.37	.37
Cultivate, duckfoot	12-foot	1.2	.31	.30	8	.03	.03
Duckfoot & harrow	10-foot	2.0	.33	.32	6	.04	.04
Seed, drill 1/	20-foot	1.0	.21	.17	100	.21	.17
Total preharvest						1.87	1.77
Combine	14-foot	1.0	1.10	.42	88	.97	.37
Combine, contract	14-foot	1.0	1.10	.42	12	.13	.05
Haul grain, truck	1½-ton	1.0	.66	.66	83	.55	---
Haul, contract, t.	1½-ton	1.0	.66	.66	17	.11	---
Total harvest 1/						1.76	.42
Total 2/						3.63	2.19

1/ Seeding and harvesting rates are assumed to be the same as for wheat grown under continuous cropping.

2/ In addition, truck use averaged 0.66 hour an acre.

WHEAT, SPRING (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA III-C2, 1950

The data presented here are based on a survey made in 1951 of 25 farms producing spring wheat after summer fallow. These farms are located in type-of-farming area III-C2, a wheat and range-livestock area in northeastern Montana and southwestern North Dakota.

The farms surveyed averaged 1,019 acres per farm. Cropland comprised about 675 acres. In 1950, 274 acres were in spring wheat on fallow, and the yield averaged about 17 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 17 to 34; the most common was about 26.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Home-grown seed	Bu.	0.9	2.00	1.80	92	1.66
Purchased seed	Bu.	.9	2.15	1.94	8	1.55
Superphosphate (40%)	Cwt.	.40	3.35	1.34	4	.05
Spray (2,4-D)	Pt.	.9	.55	.50	30	.15
Total materials						3.41

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	1.60	1.60	20	.32
Total contract work						.32

Man labor, power, and machinery used by operation in producing and harvesting spring wheat, summer fallow, area III-C2, northeastern Montana and southwestern North Dakota, 1950

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.69	0.66	34	0.23	0.22
Plow, one-way	8-foot	1.5	.39	.37	68	.40	.38
Field, cultivate	10-foot	2.6	.31	.29	70	.56	.53
Disk, tandem	10-foot	2.9	.25	.24	22	.16	.15
Disk, single	25-foot	1.5	.12	.12	15	.03	.03
Harrow, springtooth	12-foot	1.0	.22	.21	7	.02	.01
Harrow, spiketooth	20-foot	2.5	.13	.13	8	.03	.03
Drill	12-foot	1.0	.23	.21	49	.11	.10
Disk and drill	10-foot	1.0	.29	.26	51	.15	.13
Spray	36-foot	1.0	.10	.09	10	.01	.01
Spray, airplane, contract	---	1.0	.03	---	20	.01	---
Total preharvest						1.71	1.59
Windrow	14-foot	1.0	.21	.20	20	.04	.04
Combine	12-foot	1.0	.38	.32	100	.38	.32
Haul grain, truck	---	1.0	.31	.20	100	.31	---
Total harvest						.73	.36
Total 1/						2.44	1.95

1/ In addition truck use averaged 0.20 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION
AREA III-C3, 1950

The data presented here are based on a survey made in 1951 of 50 farms producing wheat after summer fallow in east central Colorado. These farms are located in the Colorado portion of type-of-farming area III-C3, a wheat and range-livestock area in the Central High Plains.

The farms surveyed averaged about 1,560 acres per farm. Cropland comprised about 1,000 acres. In 1950, 411 acres were in wheat following summer fallow, and the yield averaged slightly over 13 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 13 to 62; the most common was about 27.

There were also three farms contacted which raised an average of 110 acres of barley with summer-fallow methods similar to those of winter wheat. This barley acreage was seeded at a rate of 0.9 bushel per acre, and yielded an average of almost 23 bushels per acre.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed, home-grown	Bu.	0.6	1.75	1.05	80	0.84
Seed, purchased	Bu.	.6	2.15	1.29	20	.26
Ceresan	Bu.	.6	.03	.02	20	.01
Seed treat	Bu.	.6	.09	.05	10	.01
Copper carbonate	Bu.	.6	.04	.02	16	.01
Spray (2,4-D)	Pt.	.88	.72	.63	10	.06
Dust (2,4-D)	Lb.	.33	3.00	.99	8	.08
Total materials						1.27

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spraying	Acre	1.0	1.51	1.51	6	.09
Combining, self-propelled	Acre	1.0	2.84	2.84	22	.58
Hauling, truck	Bu.	13.3	.06	.80	32	.26
Total contract work						.93

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-C3, east central Colorado, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.70	0.67	6	0.04	0.04
Plow, moldboard	4-14 inch	1.0	.48	.46	7	.03	.03
Plow, one-way	10-foot	1.8	.33	.32	54	.32	.31
Plow, one-way	15-foot	2.6	.20	.19	37	.19	.18
Plow, Graham	13-foot	2.1	.25	.24	72	.37	.36
Weed, rod weeder	12-foot	1.2	.23	.21	39	.11	.10
Weed, rod weeder	24-foot	1.4	.12	.10	25	.04	.04
Harrow, springtooth	16-foot	2.0	.18	.17	14	.05	.05
Harrow, spiketooth	24-foot	1.5	.14	.13	4	.01	.01
Drill	14-foot	1.0	.25	.23	59	.15	.14
Drill	24-foot	1.0	.15	.14	41	.06	.06
Spray	30-foot	1.0	.10	.08	12	.01	.01
Spray, plane, contract	---	1.0	---	---	6	---	---
Total preharvest						1.38	1.33
Combine	12-foot	1.0	.42	.39	49	.21	.19
Combine, self-propelled	14-foot	1.0	.31	.29	29	.09	---
Combine, s.p., contract	14-foot	1.0	.28	.25	22	.06	---
Haul grain, truck	$1\frac{1}{2}$-ton	1.0	.29	.29	68	.20	---
Haul grain, t., contract	$1\frac{1}{2}$-ton	1.0	.22	.22	32	.07	---
Total harvest						.63	.33
Total 1/						2.01	1.66

1/ In addition, self-propelled combine use averaged 0.14 hour an acre and truck use 0.27 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA III-C5, 1951

The data presented here are based on a survey made in 1951 of approximately 68 farms producing wheat with summer fallow operations in 1951 in south central Montana. These farms are located in type-of-farming area III-C5, a comparatively small wheat and small-grain area in south central Montana.

The farms averaged about 1,415 acres per farm. Cropland comprised about 1,085 acres. In 1951, approximately 420 acres were in wheat, and the average yield was about 24 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 14 to 40. There were three common sizes: 17, 26 and 36.

Materials used and contract work hired, 1951

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.45	4.10	1.84	100	1.84
Poison		furnished by Government			20	---
Spray (2,4-D)	Pt.	.70	.56	.39	45	.18
Total materials						2.02

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Treating seed	Cwt.	.45	.17	.08	100	.08
Combining	Acre	1.0	3.50	3.50	11	.38
Hauling, truck	Bu.	24	.04	.96	7	.07
Total contract work						.53

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-C5, south central Montana, 1951

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	4-14 inch	1.0	0.56	0.54	30	0.17	0.16
Plow, moldboard	3-14 inch	1.0	.80	.77	9	.07	.07
Plow, Graham	12-foot	1.9	.32	.30	34	.21	.19
Plow, one-way	8-foot	1.3	.43	.41	39	.22	.21
Weed, rod weeder	24-foot	1.9	.14	.13	80	.22	.20
Weed, duckfoot	12-foot	2.0	.24	.22	40	.19	.18
Harrow, spiketooth	20-foot	1.3	.21	.19	75	.20	.19
Seed, drill	12-foot	1.0	.26	.23	100	.26	.23
Spray	30-foot	1.0	.16	.11	45	.07	.05
Poison	16-foot	1.0	.13	.06	20	.03	.01
Total preharvest						1.64	1.49
Combine	12-foot	1.0	.78	.51	47	.37	.24
Combine, self-propelled	12-foot	1.0	.50	.46	42	.21	---
Combine, s.p., contract	12-foot	1.0	.50	.46	11	.06	---
Haul, truck	1½-ton	1.0	.40	.54	93	.37	---
Haul, truck, contract	1½-ton	1.0	.40	.54	7	.03	---
Total harvest						1.04	.24
Total 1/						2.68	1.73

1/ In addition self-propelled combine use averaged 0.24 hour an acre and truck use 0.54 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA III-E1, 1948

The data presented here are based on a survey made in 1949 of approximately 58 farms producing winter wheat after summer fallow. These farms are located in type-of-farming area III-E1, a wheat and general-farming area, along the Upper Snake River in southeastern Idaho.

The farms surveyed averaged about 1,700 acres per farm. In 1948, cropland comprised about 1,315 acres, of which 587 acres were in winter wheat and 90 acres were in spring wheat. The yield of winter wheat averaged 21 bushels per acre.

Tractors provided most of the power used on these farms. They were used for the operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 19 to 60; the most common was about 30.

Materials used and contract work hired, 1948

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Bu.	1.4	2.25	3.15	100	3.15
Ceresan	Bu.	1.4	.02	.03	80	.02
Total materials						3.17

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Cleaning seed	Bu.	1.4	.10	.14	20	.03
Combining	Acre	1.0	4.00	4.00	4	.16
Hauling	Cwt.	12.4	.15	1.86	10	.19
Total contract work						.38

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-E1, southeastern Idaho, 1948

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	5-16 inch	1.0	0.52	0.46	41	0.21	0.19
Plow, disk	12-foot	1.0	.41	.39	59	.24	.23
Disk, tandem	10-foot	1.1	.39	.37	43	.18	.18
Harrow, spiketooth	32-foot	1.2	.10	.10	27	.03	.03
Weed, rod weeder	24-foot	2.6	.17	.16	100	.44	.42
Cleaning seed	---	1.0	.07	---	80	.06	---
Seed, drill	24-foot	1.0	.19	.17	62	.12	.11
Seed, drill	34-foot	1.0	.31	.15	38	.12	.06
Rogue, rye clipper	20-foot	1.0	.17	.17	6	.01	.01
Rogue, hand labor	---	1.0	.35	---	23	.08	---
Total preharvest						1.49	1.23
Combine	14-foot	1.0	1.04	.40	73	.76	.29
Combine, s.p.	14-foot	1.0	.49	.38	23	.11	---
Combine, contract	14-foot	1.0	1.04	.40	4	.04	.02
Haul, truck	1½-ton	1.0	.87	.87	90	.78	---
Haul, contract, truck	1½-ton	1.0	.87	.87	10	.09	---
Total harvest						1.78	.31
Total 1/						3.27	1.52

1/ In addition, self-propelled combine use averaged 0.09 hour per acre and truck use 0.87 hour per acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA III-El, 1949

The data presented here are based on a survey made in 1949 of approximately 35 farms producing wheat with summer fallow operations in southeastern Idaho. These farms are located in type-of-farming area III-El, a wheat and general farming area in the valleys of southeastern Idaho. Wheat is by far the most important crop grown on these farms, and many of the farms grow wheat exclusively. In addition to the wheat land, some operators own irrigated tracts which they operate in connection with their dryland.

The wheat farms averaged about 2,000 acres per farm. In 1949, approximately 982 acres were in wheat and the yield averaged about 16 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. Diesel tractors were used almost exclusively on these farms. The D.B.H.P. rating of the tractors averaged about 27.

Materials used and contract work hired, 1949

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.65	4.25	2.76	100	2.76
Dust	Acre	1.0	1.70	1.70	4	.07
Sacks	No.	6	.35	2.10	50	1.05
Sack twine	Lb.	.02	.90	.02	50	.01
Total materials						3.89

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating	Cwt.	.65	.23	.15	95	.14
Hauling	Cwt.	9.6	.10	.96	55	.53
Total contract work						.67

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-E1, eastern Idaho, 1949

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	5-14 inch	1.0	0.45	0.43	52	0.23	0.22
Plow, one-way	20-foot	1.0	.23	.22	34	.08	.07
Disk, single	20-foot	1.1	.18	.17	85	.17	.16
Harrow, spiketooth	40-foot	1.0	.11	.10	21	.02	.02
Weed, rod weeder	24-foot	2.1	.17	.16	41	.15	.14
Weed, rod weeder	36-foot	2.4	.12	.11	59	.17	.16
Seed, drill	24-foot	1.0	.26	.20	100	.26	.20
Dust	25-foot	1.0	.15	.15	4	.01	.01
Total preharvest						1.09	.98
Combine, self-propelled	12-foot	1.0	.58	.49	54	.31	---
Combine	16-foot	1.0	.96	.40	46	.44	.18
Haul, truck	1½-ton	1.0	.45	.41	45	.20	---
Haul, truck, contract	1½-ton	1.0	.45	.41	55	.25	---
Total harvest						1.20	.18
Total 1/						2.29	1.16

1/ In addition, self-propelled combine use averaged 0.26 hour an acre and truck use 0.41 hour an acre.

WINTER WHEAT (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA III-E1, 1952

The data presented here are based on a survey made in 1952 of approximately 45 farms that produced wheat under summer-fallow conditions in 1952 in central Idaho. These farms are located in type-of-farming area III-E1, which is comprised of a number of relatively small valleys in the southern part of Idaho. The tillable land in the upper or higher portions of these valleys is devoted almost exclusively to the production of wheat. The lower portions are irrigated and produce a variety of crops. Many farmers operate both irrigated and nonirrigated land.

These particular farms are located along Camas Creek and the Wood and Lost Rivers in central Idaho. They average about 1,600 acres per farm. In 1952, approximately 1,215 acres were cropped, including 520 acres in summer-fallow wheat, which produced an average yield of nearly 20 bushels an acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 20 to 40; the most common was about 27.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Purchased seed	Cwt.	0.60	4.15	2.49	100	2.49
Nitrate fertilizer(33-0-0)	Cwt.	1.00	4.80	4.80	2	.10
Spray (2, 4-D)	Pt.	2.0	.65	1.30	5	.06
Spray, chlordane	Pt.	1.5	1.25	1.88	2	.04
Total materials						2.69

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Spray (chlordane)	Acre	1.0	2.25	2.25	4	.09
Combine	Acre	1.0	3.50	3.50	3	.10
Total contract work						.19

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area III-E1, central Idaho, 1952

Operation	Size of equipment	Times over	Time per acre: once over: Man	Time per acre: once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Disk, tandem	10-foot	1.2	0.30	0.28	40	0.14	0.14
Disk	16-foot	1.2	.20	.19	50	.12	.12
Plow, moldboard	4-14 inch	1.0	.68	.65	28	.19	.18
Plow, moldboard	5-14 inch	1.0	.54	.51	13	.07	.07
Plow, moldboard	5-16 inch	1.0	.50	.47	18	.09	.08
Plow, Graham	12-foot	1.4	.31	.29	45	.19	.18
Harrow, spiketooth	30-foot	3.2	.13	.12	50	.21	.19
Harrow, spiketooth	40-foot	3.2	.10	.09	48	.15	.14
Rail & harrow, spiketooth	20-foot	1.5	.21	.19	23	.07	.06
Rail & harrow, spiketooth	30-foot	1.5	.14	.13	30	.06	.06
Rodweed	12-foot	1.3	.23	.21	40	.12	.11
Rodweed	24-foot	1.1	.15	.14	43	.07	.06
Plant	20-foot	1.0	.21	.19	100	.21	.19
Replant	20-foot	1.0	.21	.19	4	.01	.01
Spray	30-foot	1.0	.20	.18	7	.01	.01
Spray, contract	30-foot	1.0	.20	.18	4	.01	.01
Total preharvest						1.72	1.61
Combine, self-propelled	12-foot	1.0	.46	.43	16	.07	---
Combine, self-propelled	14-foot	1.0	.40	.37	49	.20	---
Combine, s.p., contract	14-foot	1.0	.40	.37	3	.01	---
Combine	16-foot	1.0	.66	.32	32	.21	.10
Haul grain, truck	$1\frac{1}{2}$-ton	1.0	.31	.40	100	.31	---
Total harvest						.80	.10
Total 1/						2.52	1.71

1/ In addition, truck use averaged 0.40 hour an acre and self-propelled combines 0.26 hour an acre.

WINTER WHEAT (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA III-F1, 1952

The data presented here are based on a survey made in 1952 of approximately 55 farms that produced wheat under summer-fallow conditions in 1952 in west central California. These farms are located in type-of-farming area III-F1, which is comprised of a number of comparatively small valleys and flats in the west central portion of California. These particular areas, for the most part, are either surrounded or bordered by nontillable land or intensively irrigated areas.

The areas covered in this survey were around Kettleman City, Shandon, Simmler, Fairmont, and Lancaster, California. In these areas large-scale practices are followed and summer-fallow wheat is grown almost exclusively.

The farms surveyed averaged nearly 3,000 acres per farm; about 2,400 were in cropland. In 1952, approximately 1,200 acres were in wheat, and the yield averaged a little over 13 bushels an acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The drawbar-horsepower rating of the tractors ranged from 22 to 66; the most common was about 41.

Materials used and contract work hired, 1952

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.40	5.80	2.32	100	2.32
Nitrate fertilizer(33-0-0)	Cwt.	1.00	4.30	4.30	1	.04
Sacks	No.	3.1	.25	.78	8	.06
Twine	Lb.	.1	.90	.90	8	.01
Total materials						2.43

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Cleaning & treating seed	Cwt.	.4	.20	.08	65	.05
Spraying (2,4-D)	Acre	1.0	2.00	2.00	9	.18
Rain making 1/	Acre	1.0	.15	.15	54	.08
Total contract work						.31

1/ In some areas practically all farmers contracted with firms seeding clouds, whereas in other areas no contracts were made with such firms.

Man labor, power, and machinery used by operation in producing and harvesting wheat, summer fallow, area III-F1, west central California, 1952

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Chisel	10-foot	1.0	0.42	0.40	22	0.09	0.09
Plow, wheatland	14-foot	1.5	.26	.25	45	.18	.17
Plow, stockton	150-inch	1.0	.24	.23	7	.02	.02
Disk, offset	16-foot	2.5	.21	.20	40	.21	.20
Disk, offset	28-foot	2.5	.12	.12	50	.15	.15
Rodweed	24-foot	1.8	.14	.13	42	.10	.10
Rodweed	36-foot	1.8	.09	.08	43	.07	.06
Harrow	20-foot	1.3	.20	.18	21	.05	.05
Plant	30-foot	1.0	.14	.13	19	.03	.02
Plant	36-foot	1.0	.12	.10	26	.03	.03
Plant and rodweed	30-foot	1.0	.14	.13	55	.08	.07
Harrow, spiketooth	50-foot	1.2	.07	.06	48	.04	.03
Spray, plane, contract	---	1.0	---	---	9	---	---
Total preharvest						1.05	.99
Combine, self-propelled	12-foot	1.0	.39	.36	7	.03	---
Combine, self-propelled	14-foot	1.0	.36	.33	30	.11	---
Combine	16-foot	1.0	.85	.39	17	.14	.07
Combine	20-foot	1.0	.62	.29	46	.29	.13
Haul grain, truck	1½-ton	1.0	.36	.33	100	.36	----
Total harvest						.93	.20
Total 1/						1.98	1.19

1/ In addition, truck use averaged 0.33 hour an acre and self-propelled combines 0.13 hour an acre.

WHEAT, WINTER (SUMMER FALLOW): RESOURCES USED IN PRODUCTION, AREA VI-D1, 1950

The data presented here are based on a survey made in 1950 of approximately 50 farms producing wheat in 1950 in central Utah. These farms are located in type-of-farming area VI-D1, a general farming area in central Utah. The particular farms surveyed grow mostly wheat. Some operators, however, own additional grazing or irrigated units which they operate in connection with their wheat farms.

The farms surveyed averaged about 550 acres per farm. Cropland comprised approximately 500 acres. In 1950, 206 acres were in wheat, and the average yield was approximately 23 bushels per acre.

Tractors provide most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of the tractors ranged from 17 to 30; the most common size was about 26.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed	Cwt.	0.90	3.90	3.51	100	3.51
Nitrate fertilizer	Cwt.	1.40	3.85	5.39	14	.75
Spray	Pt.	1.0	.75	.75	15	.11
Sacks	No.	.6	.30	.18	68	.12
Sack twine	Lb.	.02	.90	.02	50	.01
Total materials						4.50

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating	Cwt.	.90	.22	.20	82	.16
Combining	Acre	1.0	4.00	4.00	15	.60
Hauling	Bu.	23	.06	1.38	13	.18
Total contract work						.94

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, summer fallow, area VI-D1, central Utah, 1950

Operation	Size of equipment	Times over	Time per acre: once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Fertilize, drill	12-foot	1.0	0.39	0.28	14	0.05	0.04
Plow, moldboard	4-14 inch	1.0	.57	.55	32	.18	.18
Plow, moldboard	3-14 inch	1.0	.94	.89	12	.11	.11
Plow, moldboard	2-14 inch	1.0	1.30	1.24	3	.04	.04
Plow, wheatland	10-foot	1.3	.35	.34	53	.24	.23
Harrow, spiketooth	20-foot	2.1	.21	.19	46	.20	.18
Disk, tandem	12-foot	1.3	.36	.33	37	.17	.16
Level	12-foot	1.2	.35	.32	14	.06	.05
Disk and harrow	14-foot	1.6	.24	.22	14	.05	.05
Harrow and level	12-foot	1.0	.24	.22	11	.03	.02
Weed, rod weeder	12-foot	1.6	.31	.28	53	.26	.24
Weed, rod weeder	24-foot	2.2	.18	.17	30	.12	.11
Plant 1/	12-foot	1.0	.38	.33	100	.38	.33
Rogue	---	1.0	.53	---	12	.06	---
Spray	20-foot	1.0	.50	.20	15	.08	.03
Total preharvest						2.03	1.77
Combine, self-propelled	14-foot	1.0	.59	.54	20	.12	---
Combine	12-foot	1.0	1.07	.52	55	.59	.29
Combine	6-foot	1.0	1.52	.77	11	.17	.08
Combine, contract	---	1.0	1.30	.65	15	.20	.10
Haul grain, truck	1½-ton	1.0	.69	.60	87	.60	---
Haul, truck, contract	1½-ton	1.0	.69	.60	13	.09	---
Total harvest						1.77	.47
Total						3.80	2.24

1/ Includes some fertilizing, weeding and harrowing.

2/ In addition, self-propelled combine use averaged 0.11 hour an acre and truck use 0.60 hour an acre.

WHEAT, SPRING (AFTER CORN): RESOURCES USED IN PRODUCTION, AREA III-C2, 1950

The data presented here are based on a survey made in 1951 of 18 farms producing spring wheat, after corn. These farms are located in type-of-farming area III-C2, a wheat and range-livestock area in northeastern Montana and southwestern North Dakota.

The farms surveyed averaged 1,503 acres per farm. Cropland comprised about 729 acres. In 1950, 56 acres were in spring wheat, and the yield averaged about 12 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 17 to 35; the most common was about 26.

Materials used and contract work hired, 1950

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Seed, home-grown	Bu.	1.1	1/ 2.00	2.20	100	2.20
Total materials						2.20

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Combining	Acre	1.0	3.75	3.75	16	.60
Total contract work						.60

1/ Estimated.

Man labor, power, and machinery used by operation in producing and harvesting spring wheat, after corn, area III-C2, northeastern Montana and southwestern North Dakota, 1950

Operation	Size of equipment	Times over	Time per acre once over: Man	Time per acre once over: Power	Acreage covered	Average time per acre - all farms: Man	Average time per acre - all farms: Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Plow, moldboard	3-14 inch	1.0	0.80	0.77	22	0.18	0.17
Plow, moldboard	4-14 inch	1.0	.55	.53	19	.10	.10
Plow, one-way	8-foot	1.0	.47	.45	10	.05	.04
Disk, tandem	10-foot	2.2	.27	.26	63	.37	.36
Harrow, spiketooth	20-foot	2.0	.15	.15	59	.18	.18
Drill	14-foot	1.0	.23	.21	100	.23	.21
Total preharvest						1.11	1.06
Windrow	14-foot	1.0	.21	.20	37	.08	.07
Combine	12-foot	1.0	.35	.32	84	.29	.27
Combine, contract	12-foot	1.0	.26	.24	16	.04	.04
Haul grain, truck	---	1.0	.31	.18	100	.31	---
Total harvest						.72	.38
Total 1/						1.83	1.44

1/ In addition, truck use averaged 0.18 hour an acre.

WHEAT, WINTER (FOLLOWING SWEET CLOVER FOR GREEN MANURE): RESOURCES USED IN PRODUCTION, AREA III-B1, 1948

The data presented here are based on a survey made in 1949 of farms located in type-of-farming area III-B1 in the Palouse area of southeastern Washington and northern Idaho.

Sweet clover for green manure is usually seeded in the spring with peas or barley. An extra seeding operation and frequently an extra rolling operation are required in addition to those required to grow the companion or nurse crop. In the following spring the sweet clover is plowed under for green manure. Operations after plowing are much the same as for summer fallow.

The rates of performance presented here are based on a survey taken in 1949 covering the 1948 operations. The farms surveyed averaged 467 acres per farm. In 1948, cropland comprised 311 acres, of which 157 acres were in winter wheat, 94 acres in summer fallow, and 26 acres in sweet clover for green manure. The yield of all winter wheat on these farms averaged 30.5 bushels per acre.

Tractors provided most of the power used on these farms. They were used for operations listed below unless otherwise indicated. The D.B.H.P. rating of these tractors ranged from 18 to 45; the most common was about 29.

Materials used and contract work hired, 1948

MATERIALS USED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
		Number	Dollars	Dollars	Percent	Dollars
Wheat seed	Bu.	1.3	2.50	3.25	100	3.25
Sweet clover seed	Lb.	8	.25	2.00	100	2.00
Total materials						5.25

CONTRACT WORK HIRED

Item	Unit	Quantity per acre	Price per unit	Cost per acre	Acreage covered	Average cost per acre
Seed treating and cleaning	Bu.	1.3	.30	.39	80	.31
Combining	Acre	1.0	6.00	6.00	12	.72
Hauling	Bu.	30.5	.06	1.83	17	.31
Total contract work						1.34

Man labor, power, and machinery used by operation in producing and harvesting winter wheat, following sweet clover for green manure, area III-B1, southeastern Washington and northern Idaho, 1948

Operation	Size of equipment	Times over	Time per acre once over		Acreage covered	Average time per acre - all farms	
			Man	Power		Man	Tractor
		No.	Hrs.	Hrs.	Pct.	Hrs.	Hrs.
Green manure crop:							
Roll	24-foot	1.0	0.15	0.15	18	0.03	0.03
Seed, drill	20-foot	1.0	.22	.18	100	.22	.18
Preharvest:							
Plow, moldboard	4-16 inch	1.0	.56	.56	100	.56	.56
Disk, tandem	12-foot	1.4	.29	.28	53	.21	.20
Weed, rod weeder	24-foot	3.0	.20	.19	100	.60	.57
Harrow, springtooth	20-foot	3.0	.22	.22	50	.33	.33
Seed, drill 1/	20-foot	1.0	.21	.17	100	.21	.17
Total preharvest 2/						2.16	2.04
Combine	14-foot	1.0	1.10	.42	88	.97	.37
Combine, contract	14-foot	1.0	1.10	.42	12	.13	.05
Haul grain, truck	---	1.0	.66	.66	83	.55	---
Haul, contract, truck	---	1.0	.66	.66	17	.11	---
Total harvest 1/						1.76	.42
Total 3/						3.92	2.46

1/ Wheat seeding and harvest rates are assumed to be the same as for wheat grown under continuous cropping.

2/ Operations after plowing are approximately the same as summer fallow operations.

3/ In addition, truck use averaged 0.66 hour an acre.

State Groupings by Type-of-Farming Regions for Release of Crop Production Practice Data

Section 1

Northeast

Maine
New Hampshire
Vermont
Massachusetts
Rhode Island
Connecticut
New York
New Jersey
Pennsylvania
Delaware
Maryland

Section 2

Lake States

Michigan
Wisconsin
Minnesota

Corn Belt

Ohio
Indiana
Illinois
Iowa
Missouri

Section 3

Appalachian

Virginia
West Virginia
North Carolina
Kentucky
Tennessee

Southeast

South Carolina
Georgia
Florida
Alabama

Mississippi Delta

Mississippi
Arkansas
Louisiana

Section 4

Southern Plains

Oklahoma
Texas

Northern Plains

North Dakota
South Dakota
Nebraska
Kansas

Section 5

Mountain

Montana
Idaho
Wyoming
Colorado
New Mexico
Arizona
Utah
Nevada

Pacific

Washington
Oregon
California

Crops and Type-of-Farming Areas for which Cropping-Practice Data are Available in Section 1

Northeast

Crop	Type-of-farming area	Crop year	Crop	Type-of-farming area	Crop year
Alfalfa:	IV-F4	1949	Corn, sweet:	I-Cl	
	IV-F6			(N.J.)	1949
	(Pa.)	1949			
			Cucumbers:	I-Cl	
Asparagus:				(Md.)	1949
Fresh market	I-Cl				
	(N.J.)	1949			
Processing	I-Cl		Oats:	IV-F3	1949
	(N.J.)	1949		IV-F4	1949
				IV-F6	
Barley:	I-Cl	1949		(Pa.)	1949
	IV-F3	1949			
	IV-F6		Peas:		
	(Pa.)	1949	Processing	I-Cl	1949
Beans, lima:			Potatoes:	IV-F6	
Fresh market	I-Cl			(Pa.)	1949
	(N.J.)	1949			
Processing	I-Cl		Soybeans:	I-Cl	1949
	(N.J.)	1949		IV-F3	1949
Cantaloupe:	I-Cl		Sweetpotatoes:	I-Cl	1949
	(Md.)	1949			
			Tobacco:		
Clover hay:	IV-F4	1949	Type 32	VIII-Dl	1949
	IV-F6		Type 41	IV-F3	
	(Pa.)	1949		(Pa.)	1949
Corn, grain:	I-Cl	1949	Tomatoes:		
	IV-F3	1949	Fresh market	I-Cl	
	IV-F4	1949		(N.J.)	1949
	IV-F6		Processing	I-Cl	
	(Pa.)	1949		(Md.)	1949
Corn, silage:	I-Cl				
	(N.J.)	1949	Wheat, winter:	I-Cl	1949
	IV-F4	1949		IV-F3	1949
	IV-F6			IV-F4	1949
	(Pa.)	1949		IV-F6	1949

Crops and Type-of-Farming Areas for which Cropping-Practice Data are Available in Section 2

Lake States and Corn Belt

Crop	Type-of-farming area	Crop year	Crop	Type-of-farming area	Crop year
Alfalfa:	I-B5	1950	Corn, silage:	I-B5	1950
	IV-D1	1949		IV-A2	1950
	IV-F1	1950		IV-B2	1950
	IV-F4	1949		IV-D1	1949
	VI-H3			IV-F1	1950
	(Ohio)	1949		IV-F4	1949
				V-D1	1949
Barley:	III-E2	1950		V-F4	1949
	IV-A2	1950		V-H2	1950
	IV-B2	1950		VI-H3	
	IV-D1	1949		(Ohio)	1949
	IV-F1	1950			
	V-A1	1949	Corn, sweet:		
	V-F4	1949	(fresh market)	IV-A2	1950
Beans, dry:	IV-D1	1949	Corn, sweet:		
			(processing)	IV-A2	1950
Clover, hay:	I-B5	1950		IV-B2	1950
	IV-D1	1949			
	IV-F1	1950	Flax:	IV-A2	1950
	IV-F4	1949		IV-B1	1950
	VI-H3			IV-B2	1950
	(Ohio)	1949		V-A1	1949
				V-F4	1949
Corn, grain:	I-B5	1950			
	IV-A2	1950	Grain sorghum:	V-A1	1949
	IV-B1	1950		V-G1	1949
	IV-B2	1950			
	IV-D1	1949	Oats:	I-B5	1950
	IV-F1	1950		III-E2	1950
	IV-F4	1949		IV-A2	1950
	V-A1	1949		IV-B1	1950
	V-A1			IV-B2	1950
	(Nebr.)	1948		IV-D1	1949
	V-B1	1947		IV-F1	1950
	V-B2			IV-F4	1949
	(Ill.)	1947		V-A1	1949
	V-D1	1949		V-B1	1947
	V-F4	1949		V-B2	
	V-G1	1949		(Ill.)	1947
	V-H1	1950		V-D1	1949
	V-H2	1950		V-F4	1949
	VI-G2	1950		V-G1	1949
	VI-G3	1950		V-H1	1950
	VI-H3			V-H2	1950
	(Ohio)	1949		VI-G2	1950
				VI-G3	1950

-Continued

Crops and Type-of-Farming Areas for which Cropping-Practice data are Available in Section 2 - Continued

Lake States and Corn Belt

Crop	Type-of-farming area	Crop year	Crop	Type-of-farming area	Crop year
Peas: (processing)	IV-A2	1950	Wheat, spring:	IV-A2	1950
	IV-F1	1950		IV-B1	1950
				IV-B2	1950
Red clover seed:	I-B5	1950		V-F4	1949
Rye:	III-E2	1950			
	IV-B1	1950	Wheat, winter:	I-A6 (Mo.)	1950
Soybeans:	IV-B1	1950		I-B5	1950
	IV-B2	1950		IV-B1	1950
	IV-D1	1949		IV-B2	1950
	V-A1	1949		IV-D1	1949
	V-B1	1947		IV-F4	1949
	V-B2 (Ill.)	1947		V-A1 (Nebr.)	1949
	V-D1	1949		V-D1	1949
	V-F4	1949		V-G1	1949
	V-G1	1949		V-H1	1950
	V-H1	1950		V-H2	1950
	VI-G2	1950		VI-G2	1950
	VI-G3	1950		VI-G3	1950
	VI-H3 (Ohio)	1949		VI-H3 (Ohio)	1949

Crops and Type-of-Farming Areas for which Cropping-Practice Data are Available in Section 3

Appalachian, Southeast, and Mississippi Delta

Crop	Type-of-farming area	Crop year	Crop	Type-of-farming area	Crop year
Alfalfa:	VI-H2	1951	Oats:	IV-F3	1949
	VI-J1	1949		VII-H2	1951
				IX-D2	1949
Barley:	IV-F3	1949			
	VI-J2	1950	Peanuts:	VII-A8	1949
				IX-D2	1949
Beans, snap:				IX-D3	1949
Bush	VII-A6	1950			
Pole	VII-A6	1950	Potatoes:	VI-H2	1951
				VII-H2	1951
Corn, grain:	IV-F3	1949	Soybeans:	IV-F3	1949
	VI-H2	1951		VI-L1	
	VI-J1	1949		(N.C.)	1949
	VI-J2			VI-L1	
	(Tenn.)	1949		(Va.)	1949
	VI-J2			VII-A8	1949
	(Va.)	1950		VII-H2	1951
	VI-L1			VIII-C1	1951
	(N.C.)	1949		IX-D3	1949
	VI-L1				
	(Va.)	1949	Strawberries:	VII-H2	1951
	VII-A6	1950		VIII-C1	1951
	VII-A8	1949			
	VII-H2	1951	Sweetpotatoes:	VII-H2	1951
	VIII-C1	1951		VIII-C1	1951
	IX-D2	1949		IX-D2	1949
	IX-D3	1949			
			Tomatoes:	VII-A6	1950
Cotton:	VI-H2	1951			
	VII-A7	1947	Wheat, winter:	IV-F3	1949
	VII-H2	1951		VI-H2	1951
	VIII-C1	1951		VI-J2	
				(Tenn.)	1949
Crimson clover seed:	VI-H2	1951		VI-J2	
				(Va.)	1950
Lespedeza hay:	VI-J1	1949		VI-L1	
	VII-H2	1951		(Va.)	1949
	VIII-C1	1951			

Continued

Crops and Type-of-Farming Areas for which Cropping-Practice Data are Available in Section 3 - Continued

Appalachian, Southeast, and Mississippi Delta

Crop	Type-of-farming area	Crop year
Tobacco:		
Type 11	VI-H4	1949
	VIII-A1	1949
Type 12(and 11 & 13)	VII-B1	1947
	VIII-A1	1947
Type 13	VI-M1	1949
Type 14	VI-M1	1949
	VII-C1	1949
	IX-D2	1949
Type 21	VI-H4	1949
Type 22	VIII-C1 (Penn.) (Ky.)	1951
	VIII-C1 (Penn.) (Tenn.)	1949
Type 23	VIII-C1 (Purch.) (Ky.)	1951
Tobacco: (Contd.)		
Type 31	V-C2	1951
	VI-H1	1951
	VI-J1	1949
	VI-J2	1949
	VIII-C1 (Penn.) (Ky.)	1951
	VIII-C1 (Purch.) (Ky.)	1951
	VIII-C1 (Penn.) (Tenn.)	1949
Type 35	VIII-C1 (Penn.) (Ky.)	1951
	VIII-C1 (Penn.) (Tenn.)	1949
	VIII-C1 (Purch.) (Ky.)	1951
Type 36	V-C2	1951

Crops and Type-of-Farming Areas for which Cropping-Practice Data are Available in Section 4

Great Plains

Crop	Type-of-farming area	Crop year	Crop	Type-of-farming area	Crop year
Alfalfa:					
Irrigated	IX-F2	1951	Corn silage:		
Nonirrigated	VI-E1	1949	Nonirrigated	III-E3	1949
				V-F4	1949
Barley:			Cotton:		
Irrigated	IX-F2	1951	Irrigated	VII-A1	1951
Nonirrigated	III-A3	1947	Nonirrigated	VII-A1	1951
	III-C2	1950		VII-A2	1951
	III-E2	1950			
	III-E3	1949	Flax:		
	V-A1	1949	Nonirrigated	II-B1	1950
	V-F4	1949		III-A2	1950
	VI-E1	1949		III-A3	1947
	VII-A2	1949		III-C2	1950
				III-E3	1949
Beans, dry:				V-A1	1949
Irrigated	IX-F2	1951		V-F4	1949
			Grain sorghum:		
Broomcorn:			Nonirrigated	II-B4	1949
Nonirrigated	VII-G2	1949		III-D1	1948
				V-A1	1949
Corn, grain:				V-G1	1949
Irrigated	IX-F2	1951		VI-E1	1949
Nonirrigated	II-B4	1949		VI-E2	1949
	III-E3	1949		VII-A2	1949
	V-A1	1949		VII-G2	1949
	V-A1 (Nebr.)	1948	Hairy vetch seed:		
	V-F2	1950	Nonirrigated	VI-E1	1949
	V-F4	1949		VII-A2	1949
	V-G1	1949			
	VI-E1	1949	Hubam clover seed:		
	VI-E2	1949	Nonirrigated	VI-E1	1949
	VII-A2	1949		VII-A2	1949
	VII-G2	1949	Madrid clover seed:		
			Nonirrigated	VII-A2	1949

Continued

Crops and Type-of-Farming Areas for which Cropping-Practice Data are Available in Section 4 - Continued

Great Plains

Crop	Type-of-farming area	Crop year	Crop	Type-of-farming area	Crop year
Oats:			Wheat, spring:		
Irrigated	IX-F2	1951	Nonirrigated		
Nonirrigated	II-B4	1950	Cont. cropping	II-B1	1950
	III-A3	1950		III-A2	1950
	III-C2	1950		III-A3	1947
	III-E2	1950		III-C2	1950
	III-E3	1949		III-E3	1949
	V-A1	1949		V-F1	1950
	V-F4	1949		V-F4	1949
	V-G1	1949			
	VI-E1	1949	Summer fallow	II-B1	1950
	VI-E2	1950		III-A2	1950
	VII-A2	1949		III-A3	1947
	VII-G2	1949		III-C2	1950
Peanuts:			After corn	II-B1	1950
Nonirrigated	VI-E1	1949		III-A2	1950
	VII-A2	1949		III-C2	1950
	VII-G2	1949			
			Wheat, winter:		
Rye:			Nonirrigated		
Nonirrigated	III-A3	1950	Cont. cropping	II-B4	1950
	III-C2	1950		III-A4	1952
	III-E2	1950		III-D1	1948
	III-E3	1949		III-E4	1950
				V-A1	
Soybeans:				(Nebr.)	1949
Nonirrigated	V-A1	1949		V-F2	1950
	V-F4	1949		V-G1	1949
	V-G1	1949		VI-E1	1949
	VI-E2	1949		VI-E2	1950
				VII-A2	1949
				VII-G2	1949
Sugar beets:					
Irrigated	IX-F2	1951	Summer fallow	III-A4	1952
				III-D1	1948
				V-F2	1950

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